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MONTHLY WEATHER REVIEW

MAY 1946

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Contour lines and isotherms based on radiosonde observations at 0300 G.C.T. and winds based on pilot balloon observations at 1000 G.C.T.

MONTHLY WEATHER REVIEW

Acting Editor, Robert N. Culnan

VOL. 74, NO. 5
W. B. NO. 1470

MAY 1946

CLOSED JULY 5, 1946
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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR MAY 1946

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,003.6 mb.)				Albuquerque, N. Mex. (833.1 mb.)				Apalachicola, Fla. (1,014.0 mb.)				Atlanta, Ga. (980.2 mb.)				Big Spring, Tex. (921.9 mb.)				Bismarck, N. Dak. (953.5 mb.)				Boise, Idaho (912.1 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	93	11.1	75	31	1,620	19.4	25	31	5	22.7	86	31	300	18.9	79	31	774	21.4	48	31	505	11.4	55	31	868	15.9	47
1,000	31	123	(*)	----	31	9	(*)	----	31	127	22.7	80	31	128	(*)	----	31	59	(*)	----	31	102	(*)	----	31	75	(*)	----
950	31	552	10.1	71	31	468	(*)	----	31	576	20.6	72	31	573	18.4	71	31	514	(*)	----	31	536	(*)	----	31	527	(*)	----
900	31	999	8.1	70	31	945	(*)	----	31	1,039	17.8	68	31	1,031	15.5	72	31	982	21.7	45	31	986	10.0	52	31	981	16.3	40
850	31	1,469	5.8	68	31	1,444	(*)	----	31	1,526	14.8	65	31	1,514	12.2	75	31	1,475	18.9	43	31	1,458	6.7	56	31	1,465	12.8	40
800	31	1,963	3.2	70	31	1,964	17.4	24	31	2,037	12.0	60	31	2,020	9.6	65	31	1,993	16.1	37	31	1,953	3.3	64	31	1,970	8.6	44
750	31	2,489	0.8	67	31	2,511	12.7	26	31	2,578	8.8	53	31	2,560	6.7	56	30	2,538	12.2	38	31	2,476	−0.2	68	31	2,502	4.3	49
700	31	3,036	−1.8	66	31	3,086	7.6	31	31	3,142	5.5	48	31	3,118	3.7	53	30	3,111	8.1	34	31	3,022	−3.5	65	31	3,058	0.0	51
650	30	3,626	−5.0	68	31	3,687	2.2	36	31	3,747	1.9	46	31	3,718	0.3	48	30	3,715	3.3	36	31	3,606	−6.9	59	31	3,650	−4.1	54
600	29	4,252	−7.9	61	31	4,331	−3.1	48	31	4,385	−1.9	49	31	4,354	−3.6	45	30	4,360	−2.0	38	31	4,225	−10.5	53	31	4,274	−8.4	52
550	29	4,927	−11.8	54	31	5,008	−9.2	60	30	5,073	−5.8	48	31	5,037	−7.7	46	30	5,041	−7.2	38	31	4,890	−14.7	51	31	4,947	−13.0	49
500	28	5,651	−16.2	----	31	5,742	−15.0	74	30	5,815	−10.0	47	31	5,771	−12.4	47	30	5,781	−11.9	----	31	5,605	−19.4	46	31	5,665	−17.8	48
450	28	6,441	−21.2	----	31	6,533	−20.7	68	29	6,623	−15.5	49	31	6,578	−17.7	46	30	6,585	−17.4	----	31	6,389	−24.5	----	30	6,451	−23.6	----
400	28	7,296	−26.9	----	31	7,392	−26.9	----	29	7,497	−21.5	----	31	7,440	−23.9	----	30	7,450	−23.5	----	31	7,227	−30.7	----	30	7,298	−30.0	----
350	28	8,244	−33.9	----	31	8,341	−33.7	----	29	8,467	−28.5	----	30	8,397	−31.4	----	28	8,411	−30.8	----	30	8,168	−37.4	----	30	8,235	−36.9	----
300	28	9,306	−41.7	----	31	9,404	−41.6	----	29	9,552	−36.9	----	30	9,470	−39.7	----	26	9,480	−39.1	----	30	9,215	−44.5	----	30	9,284	−44.9	----
250	28	10,518	−50.6	----	30	10,616	−50.1	----	29	10,787	−46.5	----	30	10,691	−49.0	----	23	10,703	−47.8	----	29	10,412	−51.6	----	27	10,477	−53.0	----
200	27	11,948	−58.1	----	28	12,052	−56.7	----	29	12,231	−57.7	----	28	12,123	−59.1	----	20	12,136	−56.2	----	29	11,845	−54.4	----	25	11,897	−57.0	----
175	23	12,779	−59.2	----	27	12,894	−58.4	----	28	13,062	−63.0	----	27	12,950	−62.0	----	17	12,993	−59.7	----	29	12,702	−53.5	----	22	12,735	−56.5	----
150	17	13,714	−57.8	----	20	13,865	−59.0	----	27	14,001	−65.6	----	21	13,897	−62.7	----	11	13,954	−61.4	----	24	13,704	−53.8	----	19	13,714	−56.8	----
125	14	14,874	−58.2	----	15	15,015	−61.0	----	19	15,109	−66.9	----	16	14,998	−63.1	----	5	15,076	−62.2	----	19	14,843	−54.5	----	12	14,869	−57.6	----
100	9	16,281	−59.8	----					10	16,444	−70.3	----	6	16,384	−63.2	----					8	16,249	−55.4	----	5	16,309	−58.5	----
80	5	17,640	−59.2	----																								

Standard pressure surface (mb.)	Brownsville, Tex. (1,008.7 mb.)				Buffalo, N. Y. (988.0 mb.)				Burrwood, La. (1,013.5 mb.)				Caribou, Maine (990.2 mb.)				Charleston, S. C. (1,013.9 mb.)				Ciudad Victoria, Mexico (969.0 mb.)				Clovis, N. Mex. (865.9 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	6	25.6	87	31	221	11.4	71	31	2	23.3	88	31	191	8.1	73	31	14	19.7	92	29	335	27.8	73	31	1,306	16.9	41
1,000	31	82	25.1	87	31	119	(*)	----	31	120	23.1	84	31	108	(*)	----	31	133	20.1	87	29	53	(*)	----	31	50	(*)	----
950	31	537	22.8	82	31	551	10.9	62	31	569	20.8	77	31	532	8.3	64	31	578	18.9	77	29	513	27.0	71	31	508	(*)	----
900	31	1,005	21.4	69	31	998	8.6	66	31	1,034	18.7	65	31	979	5.8	65	31	1,039	16.2	74	29	988	24.1	71	31	977	(*)	----
850	31	1,500	19.6	55	31	1,469	5.9	67	31	1,523	16.3	63	31	1,444	2.6	71	31	1,524	13.0	71	29	1,487	20.6	73	31	1,464	18.3	38
800	31	2,020	16.9	49	31	1,963	3.3	66	31	2,037	13.7	55	31	1,932	−0.3	73	31	2,031	10.0	65	29	2,009	17.2	70	31	1,980	14.9	39
750	31	2,573	14.0	41	31	2,492	0.7	64	31	2,581	11.1	44	31	2,447	−2.6	70	31	2,570	7.2	62	29	2,563	14.5	62	31	2,524	11.2	39
700	31	3,147	10.4	39	31	3,036	−2.2	60	31	3,151	7.6	42	31	2,991	−5.3	68	31	3,131	4.1	56	29	3,139	11.4	56	31	3,094	7.1	39
650	31	3,762	6.1	39	31	3,625	−5.4	56	31	3,759	3.7	40	30	3,570	−8.3	58	30	3,729	0.8	46	28	3,755	7.1	52	31	3,699	2.2	42
600	30	4,410	1.2	44	31	4,245	−9.0	53	31	4,403	−0.7	41	30	4,188	−11.5	56	29	4,367	−3.1	48	28	4,408	2.1	52	31	4,337	−3.3	48
550	30	5,101	−4.0	51	30	4,917	−13.1	50	31	5,089	−4.8	43	30	4,851	−15.7	54	29	5,049	−7.3	51	27	5,100	−2.9	56	31	5,020	−9.0	56
500	30	5,849	−9.2	56	30	5,637	−17.7	48	31	5,837	−9.2	41	30	5,562	−20.3	55	29	5,788	−11.8	45	27	5,851	−8.0	58	31	5,749	−14.5	56
450	29	6,661	−14.5	54	30	6,420	−22.8	----	31	6,649	−14.4	----	30	6,341	−25.6	----	29	6,591	−17.2	49	27	6,669	−13.4	58	31	6,546	−19.6	----
400	29	7,541	−20.6	54	29	7,270	−28.7	----	30	7,531	−20.2	----	30	7,179	−31.4	----	28	7,461	−23.0	----	27	7,550	−19.0	57	31	7,403	−25.8	----
350	28	8,518	−27.2	----	29	8,212	−35.4	----	30	8,505	−27.4	----	30	8,110	−38.3	----	28	8,424	−30.6	----	27	8,529	−26.1	----	30	8,356	−33.0	----
300	28	9,609	−35.4	----	29	9,269	−42.6	----	30	9,596	−35.5	----	30	9,154	−45.4	----	28	9,499	−39.1	----	26	9,626	−34.4	----	30	9,422	−41.1	----
250	26	10,850	−45.0	----	27	10,494	−50.0	----	30	10,840	−44.8	----	30	10,353	−52.0	----	28	10,721	−49.3	----	24	10,876	−44.2	----	29	10,634	−50.0	----
200	25	12,301	−56.2	----	26	11,925	−57.2	----	28	12,296	−55.1	----	30	11,781	−56.6	----	28	12,147	−59.7	----	22	12,341	−55.3	----	29	12,063	−57.8	----
175	23	13,136	−61.9	----	21	12,764	−58.5	----	27	13,137	−60.0	----	27	12,623	−56.3	----	25	12,977	−64.1	----	19	13,182	−61.0	----	24	12,904	−59.9	----
150	18	14,079	−66.2	----	15	13,703	−56.0	----	17	14,092	−62.7	----	24	13,586	−54.9	----	21	13,927	−65.7	----	17	14,132	−65.7	----	18	13,850	−60.7	----
125	10	15,198	−69.0	----	7	14,852	−57.6	----	8	15,202	−65.6	----	20	14,747	−54.8	----	18	15,033	−66.2	----	5	15,210	−70.2	----	15	14,972	−61.6	----
100													13	16,173	−56.0	----	6	16,375	−66.3	----					7	16,323	−61.4	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Columbia, Mo. (984.4 mb.)				Dodge City, Kans. (921.2 mb.)				El Paso, Tex. (876.9 mb.)				Ely, Nev. (805.6 mb.)				Fort Worth, Tex. (986.8 mb.)				Glasgow, Mont. (938.1 mb.)				Grand Junction, Colo. (848.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	234	15.1	78	31	787	14.5	63	31	1,195	24.1	19	31	1,908	11.4	45	30	211	21.3	73	31	648	12.1	49	31	1,474	15.5	37
1,000	31	100	(*)	....	31	82	(*)	....	31	25	(*)	....	31	57	(*)	....	30	95	(*)	....	31	104	(*)	....	31	51	(*)	....
950	31	542	14.6	70	31	524	(*)	....	31	489	(*)	....	31	508	(*)	....	30	541	20.1	68	31	543	(*)	....	31	504	(*)	....
900	31	991	12.0	74	31	983	14.4	59	31	968	(*)	....	31	974	(*)	....	30	1,005	17.5	67	31	594	10.3	48	31	971	(*)	....
850	31	1,467	9.6	72	31	1,465	12.1	54	31	1,463	23.0	19	31	1,455	(*)	....	30	1,492	15.1	67	31	1,466	6.7	53	31	1,459	(*)	....
800	31	1,969	6.8	67	31	1,971	9.8	52	31	1,986	18.5	20	31	1,967	11.8	43	30	2,004	12.9	60	31	1,960	2.9	59	31	1,971	12.8	37
750	31	2,501	4.0	62	31	2,510	6.8	51	31	2,535	13.6	22	31	2,507	8.1	43	30	2,547	10.3	51	31	2,484	−0.5	62	31	2,511	8.4	40
700	31	3,055	1.1	56	31	3,068	3.5	47	31	3,109	8.5	25	31	3,068	3.1	49	30	3,115	6.8	42	31	3,029	−3.8	65	31	3,075	3.7	45
650	31	3,652	−2.4	49	31	3,667	−0.6	46	31	3,714	3.2	28	31	3,665	−1.8	58	30	3,717	2.7	34	31	3,612	−7.5	61	31	3,670	−1.4	55
600	31	4,280	−6.1	43	31	4,300	−5.2	49	31	4,357	−2.3	34	31	4,295	−6.7	66	30	4,361	−2.1	33	31	4,230	−11.0	59	31	4,303	−6.5	65
550	31	4,960	−10.4	40	31	4,978	−10.0	51	31	5,041	−7.6	36	30	4,967	−11.7	66	30	5,045	−7.1	35	31	4,895	−15.3	56	31	4,977	−11.9	72
500	30	5,686	−14.8	....	30	5,707	−15.0	47	31	5,775	−13.0	38	30	5,690	−17.0	59	29	5,784	−11.7	....	31	5,696	−20.1	55	31	5,699	−17.0	66
450	30	6,483	−20.3	....	30	6,499	−20.3	....	31	6,575	−18.5	....	30	6,479	−22.4	....	29	6,589	−16.8	....	31	6,383	−25.6	....	31	6,488	−22.7	....
400	29	7,338	−26.7	....	30	7,357	−26.5	....	31	7,438	−24.6	....	30	7,328	−28.7	....	27	7,642	−22.9	....	31	7,222	−31.6	....	31	7,335	−29.0	....
350	29	8,288	−33.7	....	29	8,301	−33.9	....	31	8,395	−32.1	....	30	8,269	−35.8	....	27	8,246	−30.0	....	31	8,152	−38.6	....	31	8,275	−36.3	....
300	28	9,351	−41.9	....	28	9,362	−41.9	....	30	9,465	−40.4	....	30	9,323	−43.8	....	27	9,506	−38.1	....	31	9,195	−45.8	....	31	9,325	−44.6	....
250	26	10,561	−50.2	....	27	10,569	−50.7	....	30	10,683	−49.5	....	30	10,525	−51.9	....	26	10,738	−47.0	....	28	10,397	−52.8	....	29	10,523	−52.5	....
200	21	11,993	−56.7	....	25	11,995	−58.2	....	28	12,116	−58.5	....	30	11,946	−58.4	....	24	12,180	−56.2	....	23	11,824	−55.4	....	23	11,949	−57.6	....
175	19	12,826	−57.8	....	22	12,828	−58.8	....	25	12,947	−61.0	....	26	12,781	−58.2	....	23	13,106	−59.9	....	20	12,686	−54.6	....	21	12,794	−56.9	....
150	13	13,800	−57.8	....	19	13,795	−59.1	....	20	13,899	−60.9	....	19	13,739	−58.2	....	17	13,968	−61.2	....	16	13,653	−53.7	....	18	13,768	−57.1	....
125	9	14,905	−58.1	....	14	14,942	−59.7	....	8	15,036	−63.0	....	11	14,862	−58.6	....	12	15,113	−62.7	....	9	14,835	−54.5	....	10	14,920	−57.8	....
100					10	16,352	−60.6	....													6	16,240	−54.9	....	5	16,330	−59.4	....

Standard pressure surface (mb.)	Great Falls, Mont. (886.3 mb.)				Greensboro, N. C. (984.0 mb.)				Hatteras, N. C. (1,015.6 mb.)				Havana, Cuba [1] (.... mb.)				Honolulu, T. H.[2] (.... mb.)				Huntington, W. Va. (994.0 mb.)				International Falls, Minn. (972.8 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	1,128	11.4	52	31	273	16.0	85	31	3	19.3	88	....	....	....	....	....	....	....	....	31	172	14.3	89	31	343	9.7	65
1,000	31	103	(*)	....	31	134	(*)	....	31	136	19.3	85	....	....	....	....	....	....	....	....	31	120	(*)	....	31	112	(*)	....
950	31	545	(*)	....	31	573	16.4	74	31	577	17.7	75	....	....	....	....	....	....	....	....	31	559	15.2	75	31	540	10.1	61
900	31	1,001	(*)	....	31	1,032	13.7	76	31	1,038	15.0	72	....	....	....	....	....	....	....	....	31	1,012	12.4	74	31	987	6.7	63
850	31	1,475	9.0	52	31	1,512	10.7	78	31	1,523	12.5	69	....	....	....	....	....	....	....	....	31	1,490	9.5	79	31	1,454	3.5	68
800	31	1,974	4.9	59	31	2,015	7.7	73	31	2,027	9.8	65	....	....	....	....	....	....	....	....	31	1,990	6.2	79	31	1,943	0.2	73
750	32	2,498	0.6	67	31	2,548	4.8	65	31	2,564	7.2	60	....	....	....	....	....	....	....	....	31	2,520	3.3	73	31	2,463	−2.9	71
700	31	3,047	−3.3	72	31	3,104	1.9	52	31	3,126	4.2	62	....	....	....	....	....	....	....	....	31	3,074	0.4	69	31	3,002	−5.9	63
650	31	3,631	−7.1	70	31	3,698	−1.5	52	31	3,727	0.8	63	....	....	....	....	....	....	....	....	31	3,668	−2.7	62	31	3,585	−9.3	59
600	31	4,250	−10.9	62	31	4,332	−4.6	44	31	4,365	−3.0	62	....	....	....	....	....	....	....	....	31	4,297	−6.1	54	30	4,197	−12.7	51
550	31	4,914	−15.1	56	31	5,012	−8.6	45	30	5,051	−6.9	59	....	....	....	....	....	....	....	....	30	4,977	−9.9	52	30	4,859	−16.7	51
500	31	5,628	−19.8	52	31	5,745	−13.2	50	30	5,789	−11.7	57	....	....	....	....	....	....	....	....	30	5,703	−14.3	49	30	5,565	−21.3	....
450	31	6,410	−25.2	....	31	6,546	−18.5	49	30	6,596	−16.9	62	....	....	....	....	....	....	....	....	29	6,498	−19.6	....	30	6,341	−26.3	....
400	30	7,244	−31.9	....	31	7,408	−24.6	....	29	7,465	−22.7	....	....	....	....	....	....	....	....	....	29	7,360	−25.5	....	30	7,177	−32.3	....
350	30	8,173	−39.2	....	30	8,365	−31.7	....	29	8,430	−29.9	....	....	....	....	....	....	....	....	....	29	8,315	−32.6	....	30	8,106	−39.0	....
300	30	9,211	−47.0	....	29	9,437	−39.7	....	27	9,507	−38.1	....	....	....	....	....	....	....	....	....	27	9,382	−40.8	....	30	9,147	−46.1	....
250	29	10,404	−54.4	....	29	10,658	−49.3	....	26	10,737	−47.0	....	....	....	....	....	....	....	....	....	26	10,600	−49.5	....	28	10,350	−52.8	....
200	26	11,812	−56.4	....	28	12,083	−59.2	....	24	12,185	−56.8	....	....	....	....	....	....	....	....	....	24	12,037	−58.0	....	24	11,778	−56.2	....
175	24	12,669	−55.1	....	26	12,908	−62.4	....	21	13,020	−60.9	....	....	....	....	....	....	....	....	....	21	12,873	−60.9	....	22	12,639	55.3	....
150	21	13,646	−55.4	....	19	13,857	−64.0	....	14	14,009	−63.8	....	....	....	....	....	....	....	....	....	14	13,821	−60.6	....	20	13,614	−54.6	....
125	13	14,798	−55.8	....	13	14,963	−62.6	....	6	15,101	−64.7	....	....	....	....	....	....	....	....	....	9	14,970	−60.3	....	17	14,795	−55.1	....
100	7	16,181	−56.6	....	6	16,346	−62.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6	16,264	−56.4	....
80	5	17,589	−56.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Standard pressure surface (mb.)	Joliet, Ill. (992.2 mb.)				Lake Charles, La. (1,011.7 mb.)				Lander, Wyo.[3] (834.5 mb.)				Las Vegas, Nev. (941.0 mb.)				Little Rock, Ark. (1,003.5 mb.)				Mazatlan, Mexico (1,002.5 mb.)				Medford, Oreg. (966.2 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	178	11.9	79	30	5	22.7	87	28	1,632	9.3	62	31	574	25.9	18	30	79	18.9	81	31	79	24.5	81	31	401	18.7	47
1,000	31	111	(*)	....	30	107	22.7	82	31	96	(*)	....	31	32	(*)	....	30	110	19.0	79	31	101	24.3	79	31	102	(*)	....
950	31	547	12.7	68	30	559	20.6	74	31	539	(*)	....	31	492	(*)	....	30	554	18.0	71	31	555	23.9	43	31	549	18.3	45
900	31	996	10.4	69	30	1,020	18.4	68	31	995	(*)	....	31	963	23.5	19	30	1,011	14.9	73	31	1,022	23.0	41	31	1,005	14.6	48
850	31	1,470	7.5	71	30	1,508	15.7	65	31	1,474	(*)	....	31	1,457	19.1	20	30	1,493	12.4	70	31	1,518	20.9	35	31	1,485	10.8	53
800	31	1,967	4.7	71	30	2,022	13.2	58	31	1,978	7.5	59	31	1,972	14.5	23	30	2,000	10.4	56	31	2,040	18.4	25	31	1,987	6.9	56
750	31	2,495	2.0	70	30	2,571	10.5	48	31	2,509	3.6	63	31	2,515	9.7	28	30	2,542	7.8	54	31	2,593	14.9	21	31	2,518	3.5	53
700	31	3,045	−1.1	67	30	3,133	6.8	46	31	3,062	−0.5	67	31	3,080	4.5	34	30	3,101	4.7	52	31	3,168	10.8	24	31	3,070	−0.3	51
650	30	3,639	−4.1	58	30	3,740	2.5	43	31	3,654	−4.8	70	31	3,677	−0.7	43	30	3,705	1.0	50	30	3,787	6.7	23	31	3,662	−4.0	43
600	30	4,264	−7.4	53	30	4,379	−1.6	37	31	4,275	−9.2	75	31	4,311	−5.6	48	30	4,341	−3.4	53	30	4,433	1.9	26	31	4,285	−7.7	40
550	30	4,936	−11.7	49	30	5,068	−6.1	32	31	4,945	−13.7	67	31	4,990	−10.4	48	30	5,026	−7.8	51	29	5,131	−3.3	28	31	4,956	−12.2	41
500	30	5,660	−16.5	46	30	5,805	−11.0	36	31	5,660	−18.8	63	31	5,715	−15.4	46	30	5,758	−12.6	50	29	5,877	−8.4	30	31	5,678	−17.1	42
450	30	6,447	−21.9	....	30	6,618	−16.1	36	30	6,444	−24.2	....	31	6,506	−20.8	....	30	6,565	−17.7	51	28	6,693	−14.4	....	30	6,464	−22.7	....
400	29	7,307	−27.9	....	30	7,485	−22.4	....	30	7,286	−30.5	....	31	7,360	−27.6	....	30	7,427	−23.6	....	28	7,570	−20.6	....	30	7,315	−28.7	....
350	29	8,252	−35.0	....	29	8,453	−29.7	....	30	8,220	−37.7	....	31	8,306	−34.6	....	30	8,388	−30.9	....	28	8,543	−28.0	....	30	8,256	−35.8	....
300	29	9,310	−42.8	....	29	9,534	−37.8	....	30	9,264	−45.8	....	31	9,365	−42.9	....	30	9,462	−39.2	....	25	9,632	−36.5	....	30	9,310	−43.6	....
250	29	10,515	−51.7	....	28	10,766	−47.5	....	30	10,455	−54.0	....	31	10,571	−51.7	....	30	10,686	−48.3	....	25	10,870	−46.0	....	30	10,512	−51.9	....
200	26	11,936	−57.9	....	27	12,209	−58.1	....	27	11,866	−58.7	....	30	11,988	−58.2	....	29	12,121	−57.7	....	23	12,318	−57.1	....	30	11,932	−58.4	....
175	24	12,785	−57.9	....	25	13,042	−62.9	....	23	12,709	−57.0	....	27	12,829	−58.7	....	27	12,948	−60.7	....	19	13,154	−62.3	....	28	12,769	−58.8	....
150	20	13,756	−57.7	....	23	13,980	−65.7	....	21	13,676	−56.8	....	27	13,796	−59.0	....	21	13,909	−60.8	....	8	14,115	−67.2	....	18	13,734	−57.4	....
125	15	14,842	−58.1	....	18	15,084	−65.6	....	14	14,827	−58.5	....	21	14,928	−61.0	....	18	15,041	−61.0	....	....	....	....	....	10	14,874	−57.5	....
100	8	16,309	−59.5	....	7	16,432	−66.9	....	8	16,245	−59.5	....	12	16,316	−61.6	....	9	16,427	−63.1	....	....	....	....	....	....	....	....	....
80	....	....	....	....	....	....	....	....	....	....	....	....	6	17,702	−62.2	....	....	....	....	....	....	....	....	....	....	....	....	....

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Merida, Mexico (1,006.4 mb.)				Miami, Fla. (1,015.5 mb.)				Nantucket, Mass.[3] (.....mb.)				Nashville, Tenn. (993.0 mb.)				North Platte, Nebr. (914.9 mb.)				Oakland, Calif. (1,014.3 mb.)				Ogden, Utah (860.9 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	27	29.9	63	31	4	24.4	84	----	----	----	----	31	180	18.0	78	31	849	12.0	69	31	2	14.1	73	31	1,355	13.7	45
1,000	31	84	29.2	63	31	140	23.9	83	----	----	----	----	31	120	(*)	----	31	92	(*)	----	31	121	12.8	75	31	69	(*)	----
950	31	545	26.1	64	31	589	21.0	82	----	----	----	----	31	561	16.9	70	31	534	(*)	----	31	558	11.3	70	31	517	(*)	----
900	31	1,016	23.2	64	31	1,055	18.3	75	----	----	----	----	31	1,018	13.9	72	31	986	12.5	64	31	1,004	12.6	52	31	979	(*)	----
850	31	1,512	19.8	68	31	1,543	15.3	74	----	----	----	----	31	1,498	10.8	72	31	1,464	9.8	61	31	1,482	11.8	40	31	1,462	13.8	41
800	31	2,023	15.9	72	31	2,054	12.2	74	----	----	----	----	31	2,002	8.2	66	31	1,965	6.4	64	31	1,987	9.7	32	31	1,970	10.3	39
750	31	2,580	12.7	65	31	2,595	9.1	70	----	----	----	----	31	2,536	5.9	58	31	2,494	3.0	65	31	2,524	6.5	31	31	2,505	5.9	45
700	31	3,156	9.6	53	31	3,162	5.8	65	----	----	----	----	31	3,095	2.8	53	31	3,047	−0.5	67	31	3,082	3.1	29	31	3,063	1.1	53
650	30	3,770	6.1	43	30	3,766	2.7	54	----	----	----	----	31	3,691	−0.5	52	31	3,638	−4.1	65	31	3,681	−0.6	----	31	3,654	−3.7	61
600	30	4,420	2.1	41	30	4,409	−0.9	53	----	----	----	----	31	4,328	−4.0	49	31	4,263	−8.0	60	31	4,313	−4.6	----	31	4,281	−8.2	63
550	29	5,117	−2.0	41	30	5,096	−5.0	49	----	----	----	----	30	5,011	−8.0	43	30	4,940	−12.0	57	30	4,992	−9.1	----	31	4,951	−12.7	62
500	27	5,869	−6.8	44	30	5,841	−9.6	51	----	----	----	----	29	5,745	−12.4	38	30	5,659	−17.0	53	29	5,722	−13.9	----	30	5,674	−17.4	57
450	25	6,689	−12.3	----	30	6,649	−14.9	50	----	----	----	----	29	6,549	−18.0	----	30	6,448	−22.3	----	29	6,520	−19.2	----	30	6,461	−23.0	----
400	25	7,576	−18.4	----	30	7,530	−20.7	----	----	----	----	----	28	7,414	−24.1	----	30	7,296	−28.5	----	28	7,379	−25.3	----	30	7,307	−29.4	----
350	24	8,557	−25.8	----	30	8,503	−28.2	----	----	----	----	----	28	8,374	−31.2	----	30	8,238	−35.7	----	28	8,334	−32.7	----	30	8,247	−36.5	----
300	23	9,655	−34.5	----	29	9,588	−36.7	----	----	----	----	----	28	9,448	−39.2	----	30	9,292	−43.6	----	28	9,399	−40.8	----	30	9,297	−44.8	----
250	23	10,903	−44.5	----	29	10,825	−46.5	----	----	----	----	----	27	10,669	−48.4	----	30	10,495	−51.9	----	26	10,619	−49.3	----	29	10,491	−52.5	----
200	23	12,361	−55.7	----	25	12,274	−57.9	----	----	----	----	----	24	12,104	−56.9	----	30	11,918	−57.0	----	24	12,062	−57.5	----	29	11,913	−57.4	----
175	21	13,210	−61.5	----	25	13,104	−63.0	----	----	----	----	----	21	12,930	−59.5	----	30	12,764	−57.3	----	23	12,897	−59.5	----	27	12,764	−57.0	----
150	17	14,157	−66.9	----	21	14,042	−66.0	----	----	----	----	----	16	13,876	−59.2	----	28	13,739	−56.6	----	16	13,875	−59.6	----	23	13,737	−56.8	----
125	5	15,228	−70.4	----	12	15,148	−70.0	----	----	----	----	----	9	14,995	−59.2	----	18	14,909	−57.2	----	10	15,018	−59.1	----	12	14,897	−57.4	----
100	----	----	----	----	----	----	----	----	----	----	----	----	6	16,398	−60.8	----	13	16,316	−58.9	----	----	----	----	----	8	16,276	−58.3	----

	Oklahoma City, Okla. (966.1 mb.)				Omaha, Nebr. (976.0 mb.)				Phoenix, Ariz. (967.9 mb.)				Pittsburgh, Pa. (969.8 mb.)				Portland, Maine (1,012.3 mb.)				Rapid City, S. Dak. (900.9 mb.)				St. Paul, Minn. (986.5 mb.)			
Surface	31	391	17.7	71	31	308	15.0	71	31	339	26.7	23	31	382	14.3	71	31	20	9.0	82	31	981	9.7	74	30	225	13.5	62
1,000	31	92	(*)	----	31	101	(*)	----	31	47	(*)	----	31	120	(*)	----	31	121	10.6	74	31	97	(*)	----	30	109	(*)	----
950	31	536	17.8	64	31	541	14.2	67	31	505	28.4	18	31	564	14.1	69	31	555	10.3	66	31	536	(*)	----	30	545	12.0	58
900	31	996	15.7	62	31	991	11.0	71	31	980	24.5	19	31	1,011	11.9	68	31	998	8.2	67	31	989	8.2	70	30	992	8.7	62
850	31	1,479	13.0	61	31	1,466	8.1	72	31	1,475	20.0	22	31	1,488	9.3	69	31	1,468	5.6	67	31	1,463	8.2	64	30	1,462	5.4	66
800	31	1,987	10.6	57	31	1,965	5.7	66	31	1,992	15.2	26	31	1,988	6.0	70	31	1,962	3.3	63	31	1,961	4.5	70	30	1,955	2.5	64
750	31	2,525	8.0	52	31	2,496	2.8	65	31	2,534	10.3	29	31	2,518	3.0	63	31	2,490	0.9	59	31	2,487	0.9	74	30	2,480	−0.3	56
700	31	3,089	4.6	46	31	3,047	−0.1	60	31	3,102	5.3	33	31	3,070	0.1	57	31	3,036	−1.9	55	28	3,036	−2.5	69	30	3,024	−3.5	58
650	31	3,691	0.5	45	31	3,638	−3.6	55	31	3,704	0.7	35	31	3,664	−3.0	51	31	3,625	−5.1	55	28	3,623	−6.1	65	27	3,613	−6.6	48
600	31	4,325	−4.2	45	31	4,265	−7.2	49	31	4,340	−3.7	30	31	4,291	−6.4	51	30	4,244	−8.8	53	28	4,242	−9.8	63	27	4,231	−9.8	50
550	31	5,008	−8.9	46	31	4,939	−11.1	47	31	5,024	−8.5	34	31	4,967	−10.4	45	30	4,913	−13.0	53	28	4,909	−13.9	59	27	4,899	−13.7	53
500	31	5,738	−13.8	43	30	5,662	−15.9	43	31	5,753	−13.7	----	31	5,694	−15.0	44	28	5,629	−18.0	55	28	5,626	−18.7	58	27	5,617	−18.4	52
450	31	6,537	−19.2	----	29	6,455	−21.3	----	31	6,550	−19.5	----	31	6,493	−20.2	46	28	6,410	−23.2	----	28	6,408	−24.2	----	26	6,406	−24.0	----
400	31	7,396	−25.5	----	29	7,308	−28.0	----	31	7,410	−25.9	----	31	7,347	−26.0	----	27	7,261	−28.8	----	28	7,251	−30.4	----	26	7,250	−29.9	----
350	31	8,349	−32.6	----	29	8,252	−35.0	----	31	8,362	−33.3	----	31	8,300	−32.9	----	26	8,202	−35.7	----	27	8,187	−37.3	----	26	8,187	−36.9	----
300	31	9,417	−40.5	----	29	9,310	−43.0	----	31	9,426	−41.3	----	31	9,367	−40.7	----	26	9,256	−43.5	----	27	9,232	−45.5	----	26	9,236	−44.6	----
250	30	10,637	−49.7	----	28	10,517	−51.6	----	31	10,640	−50.0	----	30	10,584	−49.3	----	25	10,479	−52.2	----	27	10,425	−53.7	----	26	10,435	−52.4	----
200	30	12,066	−58.1	----	27	11,929	−57.4	----	30	12,067	−58.1	----	29	12,011	−57.4	----	23	11,893	−58.4	----	25	11,852	−57.9	----	25	11,858	−57.4	----
175	27	12,895	−60.4	----	21	12,771	−57.3	----	28	12,905	−60.2	----	22	12,862	−58.8	----	20	12,731	−59.3	----	23	12,686	−56.4	----	21	12,708	−58.1	----
150	25	13,860	−60.1	----	18	13,744	−56.9	----	21	13,850	−61.1	----	16	13,816	−57.5	----	16	13,681	−58.4	----	18	13,657	−55.6	----	17	13,679	−55.8	----
125	21	14,993	−60.8	----	15	14,890	−57.8	----	13	14,958	−61.4	----	10	14,968	−57.5	----	8	14,778	−57.2	----	14	14,819	−56.7	----	13	14,821	−55.8	----
100	16	16,378	−61.4	----	5	16,313	−59.0	----	7	16,332	−62.5	----	6	16,363	−57.1	----	5	16,138	−57.7	----	6	16,261	−57.5	----	10	16,240	−56.7	----
80	9	17,746	−61.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

	San Antonio, Tex. (982.9 mb.)				San Juan, P. R. (1,015.6 mb.)				Santa Maria, Calif. (1,006.4 mb.)				Sault Ste. Marie, Mich. (987.4 mb.)				Spokane, Wash. (942.8 mb.)				Swan Island, W. I.[3] (..... mb.)				Tacubaya, Mexico (773.3 mb.)			
Surface	29	240	22.3	85	31	15	25.0	82	31	71	12.7	79	31	221	7.1	76	31	598	16.4	48	----	----	----	----	31	2,306	18.8	53
1,000	29	89	(*)	----	31	151	23.9	84	31	125	11.9	80	31	115	(*)	----	31	92	(*)	----	----	----	----	----	31	28	(*)	----
950	29	540	22.0	79	31	603	20.6	89	31	559	10.7	76	31	546	8.5	63	31	535	(*)	----	----	----	----	----	31	495	(*)	----
900	29	1,006	20.1	78	31	1,066	17.5	87	31	1,004	11.4	63	31	986	6.6	60	31	991	14.4	42	----	----	----	----	31	979	(*)	----
850	29	1,498	18.2	66	31	1,553	14.6	83	31	1,482	11.9	45	31	1,453	4.3	59	31	1,471	10.4	44	----	----	----	----	31	1,479	(*)	----
800	29	2,016	15.7	57	31	2,064	12.0	79	31	1,987	9.5	39	31	1,944	1.6	57	31	1,972	6.3	50	----	----	----	----	31	2,013	(*)	----
750	29	2,567	12.3	50	31	2,606	9.9	62	31	2,523	6.5	31	31	2,466	−1.4	53	31	2,501	2.2	55	----	----	----	----	31	2,571	17.0	52
700	29	3,136	8.7	45	31	3,174	7.4	44	31	3,082	3.1	30	31	3,008	−4.3	56	31	3,051	−2.1	60	----	----	----	----	31	3,152	12.3	55
650	29	3,744	4.3	43	31	3,785	4.4	42	31	3,680	−0.4	30	30	3,596	−7.3	53	31	3,639	−5.8	57	----	----	----	----	31	3,773	7.3	63
600	28	4,391	−0.4	39	31	4,429	1.3	35	30	4,313	−4.4	30	30	4,210	−10.9	53	31	4,258	−9.4	46	----	----	----	----	31	4,424	2.2	71
550	28	5,078	−5.1	44	31	5,125	−2.8	40	30	4,994	−9.0	33	30	4,878	−14.6	53	30	4,924	−13.7	43	----	----	----	----	30	5,121	−2.7	75
500	27	5,823	−10.0	41	31	5,872	−7.5	45	30	5,723	−13.8	----	29	5,591	−19.0	52	30	5,640	−18.7	42	----	----	----	----	30	5,872	−7.8	73
450	27	6,634	−15.3	----	31	6,693	−12.5	46	30	6,519	−19.6	----	29	6,371	−24.2	----	30	6,425	−24.3	----	----	----	----	----	30	6,694	−12.6	66
400	27	7,507	−21.2	----	31	7,576	−18.2	51	30	7,379	−26.0	----	29	7,217	−30.4	----	30	7,264	−30.4	----	----	----	----	----	30	7,576	−18.1	53
350	26	8,478	−28.1	----	31	8,560	−25.1	----	30	8,330	−33.4	----	29	8,152	−37.5	----	30	8,198	−37.8	----	----	----	----	----	30	8,560	−25.3	----
300	26	9,564	−36.6	----	31	9,661	−33.2	----	30	9,395	−41.5	----	29	9,199	−44.8	----	29	9,243	−45.9	----	----	----	----	----	29	9,663	−33.5	----
250	25	10,804	−45.5	----	31	10,914	−43.2	----	30	10,607	−50.1	----	27	10,403	−51.7	----	29	10,432	−54.2	----	----	----	----	----	29	10,916	−43.4	----
200	25	12,260	−54.7	----	30	12,381	−54.3	----	27	12,033	−58.0	----	25	11,821	−55.8	----	26	11,845	−57.5	----	----	----	----	----	23	12,382	−55.4	----
175	21	13,095	−59.6	----	29	13,223	−60.3	----	22	12,565	−58.8	----	23	12,669	−55.4	----	23	12,676	−55.6	----	----	----	----	----	12	13,227	−61.9	----
150	12	14,034	−61.7	----	16	14,155	−65.6	----	18	13,820	−59.1	----	20	13,652	−55.3	----	21	13,662	−55.4	----	----	----	----	----	----	----	----	----
125	6	15,111	−62.9	----	----	----	----	----	13	14,960	−60.2	----	15	14,841	−55.6	----	18	14,827	−56.5	----	----	----	----	----	----	----	----	----
100	----	----	----	----	----	----	----	----	6	16,340	−61.1	----	11	16,251	−55.9	----	10	16,259	−57.4	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1946*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,015.5 mb.)				Tatoosh Island, Wash. (1,013.3 mb.)				Toledo, Ohio (991.0 mb.)				Washington, D. C. (1,012.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	3	23.9	82	31	31	10.5	86	31	191	12.1	74	30	25	17.1	76
1,000	31	138	23.1	81	31	141	10.1	84	31	115	(*)	----	30	129	17.0	72
950	31	585	20.6	79	31	573	9.2	72	31	546	12.3	63	30	568	16.2	66
900	31	1,051	18.0	76	31	1,015	8.9	58	31	998	10.4	65	30	1,022	12.4	67
850	31	1,539	15.0	75	31	1,487	7.1	53	31	1,472	7.6	66	30	1,500	10.0	67
800	31	2,051	12.1	67	31	1,983	4.5	49	31	1,969	5.0	63	30	2,001	6.9	69
750	31	2,593	9.0	62	31	2,511	1.4	46	31	2,498	2.2	58	30	2,532	3.8	69
700	31	3,158	6.1	54	31	3,058	−1.9	48	31	3,047	−0.9	57	30	3,086	0.8	66
650	31	3,765	2.7	49	31	3,647	−5.2	46	30	3,641	−3.7	50	30	3,680	−2.6	56
600	31	4,405	−1.1	50	31	4,266	−9.1	42	29	4,267	−7.2	46	30	4,310	−5.8	49
550	30	5,091	−5.1	47	31	4,938	−13.2	41	29	4,941	−11.1	47	30	4,989	−9.7	45
500	30	5,836	−9.7	46	30	5,651	−18.1	39	29	5,667	−15.8	53	30	5,718	−14.1	46
450	30	6,648	−15.0	41	30	6,435	−23.5	----	29	6,460	−21.0	----	28	6,510	−19.8	48
400	30	7,523	−21.4	----	29	7,284	−29.6	----	29	7,313	−26.9	----	28	7,370	−26.2	----
350	30	8,490	−28.4	----	29	8,223	−36.3	----	28	8,258	−34.4	----	28	8,322	−33.3	----
300	30	9,576	−36.8	----	29	9,275	−43.9	----	28	9,318	−42.3	----	28	9,387	−41.4	----
250	30	10,811	−46.8	----	26	10,483	−51.8	----	28	10,527	−51.2	----	28	10,599	−50.6	----
200	29	12,253	−58.4	----	22	11,900	−56.5	----	27	11,949	−57.8	----	24	12,025	−59.7	----
175	29	13,081	−63.5	----	19	12,745	−55.5	----	25	12,790	−58.7	----	19	12,852	−62.1	----
150	24	14,025	−66.0	----	16	13,737	−53.9	----	19	13,740	−58.8	----	16	13,812	−63.1	----
125	19	15,127	−68.0	----	7	14,889	−55.1	----	15	14,868	−57.9	----	10	14,942	−61.5	----
100	8	16,460	−70.6	----					11	16,273	−57.8	----	7	16,339	−62.4	----
80									8	17,672	−57.7	----				

[1] Data not yet received.
[2] Insufficient 0400 observations taken during May.
[3] Surface data for old location only, 1,632 meters. Upper levels for old and new location, 1,696 meters.
*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Mazatlan and Merida, where they are taken near 0200, G. C. T.
"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.
All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.
None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during May 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N.Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (150 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	132	2.2	31	221	4.1	30	236	1.9	31	359	1.5	31	52	0.9	31	305	2.8	31	133	6.5	29	260	2.0	30	268	1.5	30	159	1.5	29	250	1.2	28	58	1.5	31	243	4.7
500							30	221	2.5										31	141	7.6	29	267	4.0	30	245	2.6	30	188	4.7	29	221	2.0						
1,000	31	151	2.3				30	226	3.8				30	82	0.9	31	300	3.6	22	160	5.8	28	236	4.0	29	246	3.6	27	211	4.6	28	220	3.6						
1,500	29	185	1.9				30	231	5.0	31	6	2.0	29	100	0.2	31	301	3.9	19	170	4.8	27	254	4.9	26	261	5.4	25	237	5.3	22	228	5.3				31	238	5.5
2,000	26	227	3.3	31	226	4.9	27	256	5.9	31	354	2.4	26	230	1.8	31	293	2.8	17	173	4.2	22	253	7.1	21	265	7.0	21	254	6.9	15	229	5.6	28	72	2.1	31	236	5.1
2,500	24	245	5.8	31	228	5.2	26	260	7.8	29	346	2.4	21	263	2.7	29	310	2.8	14	195	3.0	20	266	7.8	18	280	9.3	20	253	8.2	13	249	6.9	26	124	0.8	30	238	5.6
3,000	23	252	8.1	31	237	5.6	19	255	9.3	25	318	2.3	17	268	4.5	28	310	2.8	13	241	2.8	14	287	7.9	15	289	12.5	19	258	8.3	10	233	7.7	24	244	1.2	30	241	6.8
4,000	22	261	11.0	30	260	8.4	11	271	11.1	16	305	3.2	10	280	5.4	26	323	3.3	11	274	4.4	11	285	11.9	12	286	14.4	12	249	8.9				22	268	6.1	27	251	10.6
5,000	20	261	12.8	29	261	10.5				13	282	6.0	10	282	5.6	23	317	5.4				11	279	13.2				10	249	10.4				17	263	9.0	26	260	15.0
6,000	19	261	14.4	26	264	12.6										23	308	5.8										10	257	12.6				13	275	10.9	24	267	16.7
8,000	16	264	18.2	14	266	18.6										17	326	10.3																		21	266	22.0
10,000	10	259	24.1	12	272	21.9																																	

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	278	1.7	29	251	3.9	25	223	2.4	29	359	1.4	31	114	2.7	30	167	0.6	31	191	2.1	31	129	0.7	31	317	2.4	31	147	3.7	31	181	1.6	31	257	1.8	28	205	2.0
500							25	231	4.0				31	158	2.5	30	243	1.0				31	210	1.0	31	317	2.4	31	151	5.1	31	205	2.6	31	240	3.3	28	232	3.1
1,000							25	235	4.8	29	344	1.7	29	223	3.2	27	300	2.7	31	196	3.9	27	236	2.5	31	302	1.9	31	162	3.6	29	246	3.6	31	237	3.9	26	250	4.3
1,500				29	251	3.6	24	243	5.0	29	336	1.8	27	242	6.2	25	234	2.8	31	198	3.3	23	260	3.9	31	291	1.0	30	194	2.1	24	272	5.1	30	239	4.3	24	271	6.0
2,000	30	266	2.0	29	256	3.3	23	256	6.0	28	304	1.8	26	257	6.9	18	276	3.6	31	215	3.1	22	283	5.2	30	307	1.7	29	232	1.7	21	277	7.4	26	235	5.7	20	273	6.1
2,500	30	252	3.4	29	249	3.7	20	270	6.5	22	287	2.6	24	259	7.9	15	282	4.1	31	220	3.3	21	281	7.9	29	226	0.8	27	241	2.3	16	286	9.1	22	270	7.5	19	278	7.9
3,000	30	260	2.8	29	252	4.5	18	270	7.0	17	263	2.4	20	260	9.3	12	287	10.2	31	231	4.0	19	271	10.5	29	195	1.2	26	248	2.8	15	283	9.2	20	269	10.1	12	292	10.0
4,000	24	254	3.6	29	252	5.8	16	269	10.6	13	319	2.8	16	267	10.9				27	267	5.1	13	270	12.5	27	326	2.1	22	254	4.5	10	287	11.2	15	271	12.1			
5,000	20	270	5.8	23	265	7.1	14	266	13.0				12	271	8.5				24	272	7.1	12	274	13.5	25	302	5.4	19	264	5.0				10	274	13.4			
6,000	18	288	7.7	18	267	9.2	13	266	14.5										24	275	7.7	10	275	17.2	25	293	7.8	16	268	6.7				10	279	14.6			
8,000	12	296	11.5				10	273	17.7										19	284	12.0				20	295	12.4												
10,000																			14	282	12.8				11	312	12.8												
12,000																									10	305	11.7												

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during May 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*—Continued

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	268	6.1	30	174	1.0	31	202	0.6	31	260	1.6	29	346	3.0	30	236	1.2	30	228	0.8	31	114	3.2	31	264	4.0	27	285	2.3	31	281	1.2	30	305	0.5	27	225	3.1
500	31	275	5.0	30	169	1.3	31	198	1.1	31	253	2.5	---	---	---	30	245	2.9	30	212	1.2	31	128	3.4	31	274	3.3	27	304	3.8	31	288	1.1	---	---	---	29	211	4.7
1,000	26	275	3.4	29	183	1.8	28	198	2.4	31	243	3.5	29	347	3.0	28	235	4.4	27	214	2.2	28	149	3.5	25	287	1.6	26	302	2.9	30	263	0.7	30	239	0.5	25	229	5.5
1,500	22	310	3.1	26	238	1.8	26	232	3.3	31	236	3.3	29	347	3.1	25	245	4.8	25	222	2.4	24	182	4.3	20	267	2.9	25	317	3.2	27	251	0.4	30	287	0.3	24	251	6.5
2,000	22	309	3.3	23	257	4.3	25	265	4.5	31	228	3.5	27	323	2.4	18	250	6.2	21	249	2.2	21	198	4.3	17	241	2.6	22	309	3.9	23	267	0.6	29	320	0.6	24	257	7.6
2,500	22	314	2.8	23	263	7.2	19	262	6.3	31	233	4.3	24	271	3.3	14	260	6.9	20	245	2.1	15	231	5.2	17	228	2.5	19	321	5.2	20	242	0.4	26	312	0.8	22	270	8.7
3,000	22	310	3.3	23	261	9.1	14	259	6.6	31	235	5.1	17	279	5.6	11	283	7.9	15	230	3.1	13	243	5.0	17	240	2.6	16	327	7.1	19	196	0.8	26	346	1.3	20	270	9.7
4,000	20	304	6.1	19	267	14.6	11	257	9.9	31	249	6.7	14	286	7.7	---	---	---	13	266	4.6	10	262	7.6	16	302	4.1	14	317	0.4	16	35	0.9	21	334	3.5	16	261	12.4
5,000	19	309	7.7	19	270	15.6	10	269	12.7	31	253	8.7	11	285	9.6	---	---	---	13	263	7.7	---	---	---	16	300	7.6	14	310	11.6	13	325	1.9	15	338	6.1	10	270	14.1
6,000	19	303	8.9	15	274	16.2	---	---	---	29	264	11.0	---	---	---	---	---	---	10	265	4.8	---	---	---	14	292	8.6	---	---	---	12	298	1.6	14	343	6.0	---	---	---
8,000	16	309	13.5	10	275	17.7	---	---	---	25	269	17.1	---	---	---	---	---	---	---	---	---	---	---	---	13	291	11.0	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	14	275	18.5	---	---	---	---	---	---	---	---	---	---	---	---	11	299	12.5	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during May 1946*

Section	Surface to 2,500 meters (m. s. l.)					2,501 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	39.2	WNW.	2,500	2	Hartford, Conn.	49.9	WNW.	5,000	3	Boston, Mass.	73.2	WNW.	6,125	2	Burlington, Vt.
East-Central [2]	31.4	SSW.	1,830	16	Knoxville, Tenn.	36.5	W.	5,000	5	Huntington, W. Va.	98.0	WSW.	11,830	13	Huntington, W. Va.
Southeast [3]	38.0	WSW.	2,142	16	Spartanburg, S. C.	32.2	W.	2,986	28	Jacksonville, Fla.	50.0	W.	13,691	12	Charleston, S. C.
North-Central [4]	34.6	W.	1,908	6	Muskegon, Mich.	35.3	WNW.	5,000	11	Huron, S. Dak.	84.5	WSW.	13,897	14	Marquette, Mich.
Central [5]	45.4	SSE.	1,725	27	Goodland, Kans.	43.0	W.	3,328	5	Joliet, Ill.	67.0	SW.	10,499	13	Columbia, Mo.
South-Central [6]	39.2	WSW.	2,082	23	Amarillo, Tex.	48.0	WSW.	4,300	20	Burrwood, La.	92.0	WSW.	8,870	20	Burrwood, La.
Northwest [7]	46.5	SW.	1,884	7	Burns, Oreg.	32.9	NNE.	5,000	7	Medford, Oreg.	74.4	W.	8,801	7	Medford, Oreg.
West-Central [8]	43.5	SW.	2,500	7	Ely, Nev.	48.5	SW.	2,580	7	Ely, Nev.	59.6	W.	7,491	1	Pueblo, Colo.
Southwest [9]	39.2	SSE.	2,458	27	Roswell, N. Mex.	36.1	NW.	2,547	29	Sandberg, Calif.	78.0	W.	12,350	16	Albuquerque, N. Mex.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

RIVER STAGES AND FLOODS FOR MAY 1946

C. R. JORDAN

Precipitation during May was above normal over the eastern half of the country except in the western Lakes region. It was also wetter than usual from Nebraska and South Dakota westward through Wyoming, southern Idaho, northern Utah, and large portions of Oregon, Nevada, and northeastern California. Amounts were much above normal in Pennsylvania, the lower Mississippi Valley, and much of Nevada. Rainfall was generally below normal over the northern and southern parts of the western half of the country, with no measurable precipitation reported at several stations in southern Arizona.

Severe floods occurred in western New York and north-central Pennsylvania. All previous flood stages of record were exceeded in many of the headwater tributaries of the Susquehanna River. Drought conditions continued in the southwestern states.

Atlantic Slope drainage.—A major flood occurred in the Susquehanna River Basin during the last few days of May as a result of heavy rain during the period May 26–29, following a period of above-normal rainfall. Many of the northern tributaries of the West Branch of the Susquehanna River reached heights that exceeded any previously recorded stages by 2 to 4 feet. Flooding was severe on the Tioga, Chemung, and Canisteo Rivers and other smaller streams. Several lives were lost and there was considerable property damage. A more detailed report of this flood will be included in the next issue of the REVIEW.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.—Heavy rains over the headwaters of the Des Moines River during the last week of May caused considerable overflow in the upper reaches of the Raccoon and Des Moines Rivers and contributed to slight overflow downstream on the Des Moines at both Eddyville and Ottumwa, Iowa.

Missouri Basin.—Light to moderate overflow occurred at scattered points in Kansas and Missouri.

An excessively heavy rainstorm occurred in the vicinity of Ewing and Orchard, Nebr., on the afternoon of May 23. Ewing reported 3.57 inches of rain, with approximately 3 inches occurring within an hour. At Orchard the total fall was 5.22 inches, with about 4 inches within an hour. Unofficial reports indicate that the peak rainfall occurred 5 or 6 miles west of Ewing and about the same distance south of Orchard, with amounts ranging up to 7.50 inches.

This cloudburst caused a rapid rise in the Elkhorn River to bankful stage at, and for a few miles below, Ewing. The rise amounted to only about 4 feet at Clearwater, approximately 15 miles downstream. No flood damage was reported due to overflowing of streams. However, extensive damage to newly planted corn resulted from the intensity of the rainstorm, and many fields will have to be replanted in the Ewing-Clearwater-Orchard area.

Ohio Basin.—The heavy rain near the end of May over southern New York and northern Pennsylvania caused several widely separated flash floods in headwater tributaries of the Allegheny River. Coudersport and Port Allegany, Pa., and Olean, N. Y., had the highest floods since July 1942. The most serious flooding occurred at New Castle, Pa., on the Neshannock Creek; Oil City on Oil Creek; Coudersport, Port Allegany, and other smaller towns on the headwaters of the Allegheny River. Damage was extensive, amounting probably to more than a million dollars.

Flood stage was not reached on the Ohio River at or below Pittsburgh, Pa.

There was some light overflow of the Scioto River in the vicinity of Piketon, Ohio.

General heavy rainfall in central and southern Indiana on May 1 and 2 caused a considerable rise in the lower Wabash, the lower West Fork of White, and the main White Rivers. Frequent rains thereafter, with heavy amounts rather general on the 11th and the 16th, caused several moderate rises in the upper portions and sustained high water in the lower portions of these streams during much of the latter part of the month. A few upper Wabash stations barely reached flood stage, and this occurred on only one or two days. Mt. Carmel was the only lower Wabash station reaching flood stage, and the crest here was only 1.5 feet above flood stage. On the lower West Fork and on the main White the excess above flood stage was several feet. Damage from this flood was slight.

White, Arkansas, and Red Basins.—Light overflow occurred at most stations in the White River Basin in Arkansas and moderate flood stages were reached on the Ouachita River. Rains were frequent over eastern Texas, and flood stages were exceeded several times on the Sulphur and Cypress Rivers, with numerous crests reported at most stations.

West Gulf of Mexico.—Frequent heavy rainfall over eastern Texas and Louisiana caused overflow of most streams in the area, with rather severe flood stages on the Sabine and upper Trinity Rivers. The greatest damage or loss caused by the floods was probably the suspension of farming activities and the delay of planting of crops. The floods in the Sabine and Trinity Rivers continued at the end of the month.

Pacific Slope drainage.—Severe local damage was caused by a cloudburst that occurred on May 26, near Kendrick, Idaho. The sudden heavy rainfall hit American Ridge, near Kendrick, late in the afternoon, sending a 6-foot high wall of water rushing down Brady Gulch. Considerable damage was reported to automobiles, buildings, and highways.

An early melting of the above-normal snow cover in the Columbia River Basin caused a seasonal peak earlier than usual. Peak stages were reached in the Columbia River during the closing days of May or early in June. Flood stages were exceeded slightly at The Dalles, Oreg., and Vancouver, Wash., on the Columbia, and at Portland, Oreg., on the Willamette. The Kootenai River at Bonners Ferry, Idaho, reached the third highest stage in the past 30 years, but the crest was about one-half foot under flood stage.

FLOOD STAGE REPORT FOR MAY 1946

[All dates in May unless otherwise specified.]

River and station	Flood stage	Above flood stages—dates		Crest [1]	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	*Feet*			*Feet*	
Lehigh: Lehighton, Pa.	9	28	28	9.0	28
Pine Creek: Cedar Run, Pa.	12	27	28	14.4	28
West Branch:					
Renovo, Pa.	16	27	28	20.2	28
Lock Haven, Pa.	21	27	29	26.85	28
Williamsport, Pa.	20	27	29	29.6	28
Lewisburg, Pa.	18	27	30	29.0	29
Susquehanna:					
Towanda, Pa.	16	27	30	25.1	29
Wilkes-Barre, Pa.	22	28	30	32.0	29
Danville, Pa.	20	28	31	26.0	29
Sunbury, Pa.	16	28	30	23.0	29
Harrisburg, Pa.	17	28	30	21.8	29
James: Columbia, Va.	10	5	8	15.4	5
Roanoke: Williamston, N. C.	10	21	(2)	10.6	26, 31
Neuse: Smithfield, N. C.	13	28	29	14.6	29
Cape Fear: Lock No. 2, Elizabethtown, N. C.	20	2	2	20.6	2
Saluda: Pelzer, S. C.	6	4	6	11.0	5
Altamaha: Charlotte, Ga.	12	26	28	12.2	28
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	Apr. 26	8	15.6	Apr. 28–29.
		17	(2)	20.6	24
Choctawhatchee:					
Geneva, Ala.	23	23	23	23.6	23
Caryville, Fla.	12	20	27	13.3	24
Tombigbee:					
Lock No. 4, Demopolis, Ala.	39	22	25	41.1	23
Lock No. 3, Ala.	33	20	27	43.7	23–24
Lock No. 1, Ala.	31	21	28	33.0	25
Pascagoula: Merrill, Miss.	22	18	20	22.3	19
		21	22	22.1	22
Pearl:					
Jackson, Miss.	18	19	(3)	27.4	27
Pearl River, La.	12	16	(3)	14.9	22
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Raccoon: Jefferson, Iowa	12	26	29	13.4	27
Boone: Webster City, Iowa	10	26	26	10.8	26
Des Moines:					
Eddyville, Iowa	15	30	31	16.4	31
Ottumwa, Iowa	9	31	31	9.4	31
Missouri Basin					
Grand: Chillicothe, Mo.	18	3	5	25.5	4
		6	7	23.5	7
Osage:					
Quenemo, Kans.	27	------	------	31.7	11
Ottawa, Kans.	24	10	11	25.0	10–11
Osawatomie, Kans.	28	11	12	30.5	11
La Cygne, Kans.	25	11	14	27.2	12–13
Gasconade: Jerome, Mo.	15	26	26	17.0	26
Ohio Basin					
Allegheny:					
Olean, N. Y.	10	28	(3)	17.3	29
Port Allegany, Pa.	9	28	29	11.6	28
Parkers Landing, Pa.	20	28	28	20.3	28
Lock No. 8, Mosgrove, Pa.	24	28	28	24.4	28
Lock No. 5, Schenley, Pa.	24	28	30	29.5	28
Lock No. 4, Natrona, Pa.	24	28	29	27.4	28
Lock No. 3, Acmetonia, Pa.	25	28	29	27.4	28
Scioto: Piketon, Ohio	16	18	18	16.8	18
West Fork:					
Anderson, Ind.	10	------	------	10.0	17
Elliston, Ind.	18	17	23	22.8	20
Edwardsport, Ind.	12	3	7	15.1	5
		13	29	19.7	21
				15.8	16
White:					
Petersburg, Ind.	16	18	26	19.9	23
Hazleton, Ind.	16	18	27	20.7	24
Wabash:					
Bluffton, Ind.	10	29	(2)	11.2	30
Wabash, Ind.	12	30	30	12.1	30
LaFayette, Ind.	11	19	19	11.2	19
Terre Haute, Ind.	14	20	21	14.2	20
Mt. Carmel, Ill.	17	21	26	18.5	24
Ohio: Dam No. 7, Midland, Pa.	30	29	29	32.6	29
White Basin					
Black:					
Leeper, Mo.	11	25	25	13.1	25
Poplar Bluff, Mo.	16	2	4	17.8	3
		18	20	18.2	18
		26	28	20.0	26
Black Rock, Ark.	14	2	(2)	23.5	26
White:					
Cotter, Ark.	21	28	28	21.3	28
Calico Rock, Ark.	19	17	17	21.2	17
		26	26	21.7	26
		28	29	20.8	29
Batesville, Ark.	23	17	18	27.7	17
		25	30	27.6	26
Newport, Ark.	26	19	(2)	30.0	30

FLOOD STAGE REPORT FOR MAY 1946—Continued

[All dates in May unless otherwise specified.]

River and station	Flood stage	Above flood stages—dates		Crest [1]	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM—continued	*Feet*			*Feet*	
***White Basin*—Continued**					
White—Continued					
Augusta, Ark.	32	19	(2)	34.9	31
Georgetown, Ark.	21	5	12	21.8	6
		20	(2)	27.4	June 1
Des Arc, Ark.	24	24	(2)	----	----
Clarendon, Ark.	26	8	(2)	----	----
St. Charles, Ark.	25	16	(2)	----	----
Arkansas Basin					
Petit Jean: Danville, Ark.	20	1	6	22.6	5
		24	28	23.3	26
Red Basin					
Saline: Benton, Ark.	20	24	24	25.4	24
Ouachita:					
Arkadelphia, Ark.	17	Apr. 29	2	28.1	Apr. 30
		18	18	17.2	18
		24	28	26.7	24
Camden, Ark.	26	2	10	35.0	5
		19	(2)	36.9	29
Little: Whitecliffs, Ark.	25	27	(2)	27.1	28
Sulphur:		Apr. 30	4	39.6	1
Hagansport, Tex.	38	13	13	38.3	13
				39.5	18
				41.0	20
		15	(2)	20.6	24
Naples, Tex.	22	Apr. 30	9	23.4	1
				25.1	5
				27.0	21
		16	(2)	27.5	24
				28.6	28
Cypress: Jefferson, Tex.	18	19	(2)	20.4	21
				22.2	26
Lower Mississippi Basin					
St. Francis:					
Fisk, Mo.	20	2	(2)	23.3	6-7, 22
				23.4	25, 29
				20.8	8-9
St. Francis, Ark.	18	5	(2)	20.9	11-12
				21.5	27-29
Coldwater: Sarah, Miss.	18	24	27	21.9	24

FLOOD STAGE REPORT FOR MAY 1946—Continued

[All dates in May unless otherwise specified.]

River and station	Flood stage	Above flood stages—dates		Crest [1]	
		From—	To—	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Feet*			*Feet*	
Bayou Nespique: Basile, La.	22	19	23	23.2	21
Mermentau: Mermentau, La.	5	18	25	6.0	21
Whiskey Chitto Creek: Mittie, La.	15	15	21	18.5	17
Calcasieu:					
Oberlin, La.	16	17	17	16.4	17
		21	21	17.4	21
Kinder, La.	16	16	23	17.9	18
Sabine:					
Mineola, Tex.	14	14	(2)	----	----
Gladewater, Tex.	26	22	(2)	----	----
Logansport, La.	25	17	24	27.9	20
		30	(2)	----	----
Bon Wier, Tex.	17	15	23	18.9	18
		29	(2)	----	----
Neches: Evadale, Tex.	16	23	29	16.2	26
Elm Fork: Carrollton, Tex.	6	29	(2)	----	----
East Fork: Rockwall (nr.), Tex.	10	1	2	11.1	1
		14	18	12.1	17
		20	28	12.9	22
				14.3	25
		28	(2)	----	----
Trinity:					
Dallas, Tex.	28	16	17	32.0	16
		29	(2)	40.3	30
Rosser, Tex.	26	30	(2)	----	----
Trinidad, Tex.	28	29	(2)	----	----
Liberty, Tex.	24	15	30	27.4	19-20
Nueces: Cotulla, Tex.	15	30	30	15.4	30
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Willamette: Portland, Oreg.	18	22	(2)	20.9	June 1
Columbia:					
The Dalles, Oreg.	40	11	(2)	44.1	30
Vancouver, Wash.	15	9	(2)	20.4	June 1

[1] Provisional.
[2] Continued at end of month.

CLIMATOLOGICAL DATA FOR MAY 1946

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	70.9	−0.5	Dothan	92	25	Valley Head	37	10	7.47	+3.52	Robertsdale	13.20	Wheeler Dam	3.89
Arizona	66.2	+.2	Ehrenberg	106	15	Alpine	16	13	.10	−.22	Natural Bridge	1.09	75 stations	.00
Arkansas	66.4	−2.7	Pine Bluff	93	2	3 stations	33	12	9.47	+4.42	Forester	18.51	Osceola	4.39
California	61.0	−.4	Greenland Ranch	109	6	Tamarack	18	1	.59	−.35	South Entrance Yosemite National Park.	2.82	28 stations	.00
Colorado	50.0	−2.4	Los Animas	91	22	Allen's Park	10	20	2.13	+.25	Idalia	6.15	2 stations	.09
Florida	76.8	+1.2	2 stations	96	[1]7	2 stations	49	[1]9	7.76	+3.82	Marianna	16.37	Key West Airport	1.77
Georgia	70.5	−1.0	Folkston	93	25	Blairsville	33	[1]9	6.73	+3.29	Camilla	10.72	Dover	1.97
Idaho	52.7	−.3	Orofino	91	3	2 stations	12	1	1.58	−.09	Spencer	3.22	Nampa	.14
Illinois	59.9	−2.8	2 stations	87	[1]24	Freeport	31	13	6.08	+1.93	Effingham	12.52	Gelena	2.12
Indiana	60.0	−2.3	Kokomo	87	15	Howe	27	13	6.06	+1.97	Terre Haute	11.53	Albion	2.71
Iowa	56.5	−3.6	Muscatine	89	28	2 stations	19	[1]11	4.45	+.35	Pocahontas	8.80	Guttenberg	1.27
Kansas	60.5	−3.3	Syracuse	94	22	Tribune	23	11	3.44	−.36	Junction City	10.45	Dodge City	1.56
Kentucky	63.6	−1.8	2 stations	87	[1]30	2 stations	33	[1]5	5.50	+1.53	Lovelaceville	10.04	Gooserock	2.76
Louisiana	73.3	−.4	Calhoun	93	24	8 stations	50	[1]5	11.25	+6.52	Morgan City	18.40	Buras	6.01
Michigan	52.2	−2.0	Kenton	87	29	Higgins Lake	13	13	3.50	+.22	Sandusky	5.72	Scottville	1.73
Minnesota	52.3	−2.8	2 stations	88	28	2 stations	11	[1]11	3.10	−.17	Albert Lea	7.01	Wheaton	.81
Mississippi	70.3	−1.5	do	92	2	Brookhaven	42	8	8.12	+3.79	Tunica	15.46	Moorhead	2.47
Montana	50.2	−1.8	4 stations	92	[1]26	Opheim No. 1	2	10	1.90	−.21	Albion	5.18	Opheim No. 1	.25
Nebraska	55.2	−4.0	Culbertson	92	22	2 stations	19	11	4.10	+.70	Fullerton	8.43	Denton	.94
Nevada	56.9	+1.1	Overton	103	5	Geyser	14	1	.92	+.07	Emigrant Pass	3.95	2 stations	.00
New England	54.2	−1.0	Franklin, N. H.	92	25	Bloomfield, Vt	14	3	5.00	+1.61	Norwalk, Conn	10.78	Hiram, Maine	2.50
New Jersey	60.8	+.2	Runyon	91	26	2 stations	26	9	6.63	+3.01	Little Falls	11.10	Runyon	4.34
New Mexico	58.5	−1.1	Orogrande	101	25	do	13	[1]2	.67	−.54	Clayton	6.62	12 stations	.00
New York	54.9	−1.2	Dansville	92	23	do	17	3	5.11	+1.60	Dobbs Ferry	14.38	Wolcott	2.23
North Carolina	66.2	−.7	Monroe	95	12	Transou	28	9	5.48	+1.47	Carthage	10.30	Monroe	2.04
North Dakota	50.6	−2.9	Arvilla	88	26	Belcourt	10	12	1.60	−.70	Selfridge	3.94	Minot Airport	.20
Ohio	58.9	−1.7	3 stations	86	31	Paulding	27	13	5.64	+1.88	Canfield	10.53	Lima	2.80
Oklahoma	65.9	−2.4	2 stations	99	[1]23	Hooker	27	2	5.92	+1.20	Kiamichi Tower	17.14	Hollis	1.51
Pennsylvania	58.3	−1.4	York	92	26	Kane	23	10	7.25	+3.28	Sunbury	11.80	West Newton	3.02
South Carolina	69.8	−1.1	Loris	95	24	Longcreek	39	9	4.37	+.89	Laurens	8.21	Blackville	1.77
South Dakota	53.0	−3.4	Dupree	92	17	Andover	13	12	4.38	+1.49	Deadwood	18.61	Howard	.69
Tennessee	65.0	−1.9	2 stations	89	[1]24	Rugby	32	9	5.42	+1.30	Parksville	8.41	Hohenwald	3.25
Texas	72.4	−.6	Rio Grande City	112	19	2 stations	32	11	5.31	+1.61	Port Arthur	20.87	2 stations	.00
Utah	54.4	−1.1	St. George	99	20	Silver Lake(Brighton)	10	1	1.82	+.61	Rice Canyon Airport	6.28	Hanksville	T
Virginia	63.3	−1.0	2 stations	92	[1]25	Big Meadows	26	4	6.16	+2.43	Onley	12.22	Wytheville	3.05
Washington	57.3	+2.5	Hatton	94	3	Paradise R. S.	19	1	1.02	−.91	Mill Creek	3.81	Coupeville	.09
West Virginia	60.8	−1.0	4 stations	90	[1]15	2 stations	25	9	5.11	+1.10	Kimbrabow	8.79	Great Casapon	1.66
Wisconsin	53.6	−1.7	Menomonie	90	27	Iron River	20	[1]11	2.85	−.81	New London	5.25	Prentice	1.37
Wyoming	46.8	−2.8	Basin	91	22	2 stations	0	11	3.13	+1.06	Kirtley	9.57	Powell	.49
Alaska (April)	24.4	−2.9	Tree Point	60	18	Allakaket	−38	3	1.49	+.02	Little Port Walter	17.25	2 stations	.03
Hawaii	71.7	.0	U. S. Magnetic Obser.	92	21	Haleakala, R. S.	34	6	2.78	−4.54	Papaikou	12.58	13 stations	.00
Puerto Rico	76.3	−.2	Guayama No. 3	95	[1]18	Guineo No. 2	54	[1]2	8.30	+.38	Espino	24.47	Ensenada	1.85

[1] Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR MAY 1946

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Average cloudiness, tenths: Clear days	Average cloudiness, tenths: Partly cloudy days	Average cloudiness, tenths: Cloudy days	Average cloudiness, tenths: 0–10	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
NEW ENGLAND	*Ft.*	*Ft.*	*Ft.*	*Mb.*	*Mb.*	*Mb.*	°F.	°F.	°F.		°F.	°F.		°F.	°F.		°F.	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
Eastport	75	67	85	1,001.1	1,013.9	−0.7	53.9	+0.1	74		48.1	+.4	72	23	56	26	3	40	26	526	40	78	4.80	+1.6							7.1			
Greenville, Maine	1,070	6	41	974.6	1,013.9	.....	49.0	−.5	84	25	61	22	3	37	45	495	40	...	3.62	+.6	.76	17	9.7	s.	32	e.	27	6	9	16	6.9	0.0	0.0	1
Portland, Maine [1]	103	5	43	1,010.2	1,014.2	−.7	51.6	+.4	77	25	63	26	4	40	41	415	44	76	3.68	+.5	.75	16	.....	s.	.....	.....	.....	4	10	17	.....	.0	.0	0
Concord [1]	289	5	45	1,003.7	1,014.6	−.6	54.0	+1.1	90	25	68	22	4	40	48	351	43	67	3.50	+.1	.55	16	9.6	s.	28	w.	9	6	9	16	6.7	.0	.0	1
Burlington [1]	408	5	51	999.0	1,013.5	−1.4	53.7	−2.8	91	25	64	27	3	43	38	365	44	70	4.80	+1.8	.95	16	8.2	nw.	28	w.	6	5	6	20	7.1	.0	.0	1
Boston [1]	124	33	62	1,009.8	1,014.6	−.6	4.03	+1.2	.80	17	9.8	s.	27	s.	11	5	5	21	7.0	.0	.0	1
Nantucket	12	4	34	1,014.6	1,014.9	−.4	68.0	+.9	87	31	67	36	3	49	39	237	44	66	4.91	+1.7	1.52	15	12.1	sw.	41	ne.	28	3	10	18	7.4	.0	.0	1
Block Island	26	11	46	1,014.2	1,015.2	−.4	52.3	+.0	73	31	60	31	4	45	25	391	48	86	6.79	+3.9	1.65	13	13.2	sw.	31	ne.	29	4	8	19	7.3	.0	.0	1
Providence [2]	159	46	60	1,008.8	1,014.9	−.3	53.8	+1.0	73	31	60	38	4	48	23	343	48	84	4.19	+.7	1.16	14	15.0	sw.	37	ne.	28	5	9	17	6.8	.0	.0	2
Hartford [1]	159	5	44	1,008.8	1,014.6	−.6	59.0	+.5	89	31	69	37	3	49	44	206	44	70	3.99	+1.0	.99	13	9.3	sw.	34	w.	6	5	9	17	7.2	.0	.0	2
New Haven [1]	107	5	39	1,010.8	1,014.6	−1.6	57.1	−.4	87	31	68	33	9	46	42	262	47	72	5.87	+2.3	2.31	16	9.1	s.	35	w.	6	6	8	17	7.0	.0	.0	2
							56.2	+.8	82	30	66	33	9	46	40	283	48	75	7.47	+4.1	3.09	16	7.2	sw.	22	ne.	28	3	11	17	7.3	.0	.0	3
MIDDLE ATLANTIC							62.3	+0.6										74	6.08	+2.7											6.6			
Albany [1]	97	26	40	1,010.5	1,014.2	−1.0	55.2	−2.5	85	25	66	30	4	44	39	312	43	68	4.55	+2.0	1.14	17	9.6	s.	38	w.	9	6	7	18	6.8	.0	.0	1
Binghamton [1]	871	60	79	982.7	1,014.6	−1.3	56.4	−1.0	84	25	67	31	9	46	38	277	46	75	7.36	+4.0	2.32	17	5.9	w.	24	w.	6	4	9	18	7.4	.0	.0	4
New York	314	415	454	1,002.7	1,013.9	−1.7	61.0	+.4	85	30	70	43	8	53	34	154	46	66	5.85	+2.6	1.64	13	13.4	w.	41	w.	6	5	10	16	6.8	.0	.0	5
Harrisburg [1]	374	30	49	1,000.7	1,014.2	−1.0	62.1	+.3	86	25	72	39	10	52	36	125	50	71	7.54	+4.1	1.75	16	7.5	se.	24	se.	4	5	8	18	7.1	.0	.0	10
Philadelphia [1]	114	5	57	1,010.2	1,014.6	−1.0	64.0	+1.1	86	25	73	44	4	55	34	101	52	71	5.85	+2.6	1.44	14	7.9	sw.	25	sw.	21	6	8	17	6.6	.0	.0	6
Reading	323	47	306	1,002.7	1,014.6	.....	62.5	+.6	86	31	72	43	5	52	33	123	.....	...	5.30	+1.6	1.86	15	10.7	w.	33	e.	27	8	6	17	6.7	.0	.0	8
Scranton	805	72	104	985.4	1,014.2	−1.0	58.8	−.6	87	25	69	33	9	49	38	212	.....	...	7.62	+4.4	2.13	15	6.5	n.	25	nw.	9	7	11	13	6.4	.0	.0	4
Atlantic City	52	37	172	1,012.5	1,014.6	−.6	60.3	+2.2	85	30	66	46	4	54	35	153	53	82	4.74	+1.7	1.33	14	16.0	s.	38	ne.	3	6	6	19	7.4	.0	.0	5
Trenton	190	89	107	1,007.5	1,014.2	.....	62.4	+1.3	87	31	72	42	9	52	36	127	49	68	5.04	+2.0	1.42	14	9.1	s.	29	s.	21	5	9	17	6.9	.0	.0	3
Baltimore [2]	123	100	215	1,010.2	1,014.6	−1.0	65.8	+1.4	89	25	75	44	4	57	31	73	54	73	6.39	+2.8	1.76	14	9.9	s.	30	sw.	12	12	3	16	5.8	.0	.0	7
Washington [3]	112	56	100	1,010.5	1,014.6	−1.3	65.5	+1.8	89	25	76	44	4	55	33	77	55	75	6.74	+3.0	1.48	16	6.9	sw.	24	sw.	11	8	8	15	6.4	.0	.0	8
Lynchburg [1]	686	4	50	990.2	1,014.9	−1.0	63.2	−2.7	85	25	74	37	4	53	34	107	55	78	4.08	+.4	1.01	16	8.4	sw.	30	ne.	3	7	10	14	6.3	.0	.0	7
Norfolk [2]	91	80	125	1,011.9	1,015.2	−.7	68.4	+2.2	88	25	78	46	4	59	27	48	59	79	6.50	+2.7	1.84	17	10.0	sw.	30	w.	16	5	13	13	6.6	.0	.0	10
Richmond	144	11	52	1,009.1	1,014.2	−1.4	66.8	+.1	86	25	77	40	4	56	.....	64	56	77	7.59	+3.8	1.42	11	7.4	sw.	24	sw.	20	11	9	11	5.4	.0	.0	9
SOUTH ATLANTIC							69.6	−0.1										79	4.67	+1.2											6.6			
Asheville	2,253	77	92	936.7	1,015.2	−.4	62.5	−.1	80	25	72	37	9	52	33	112	53	79	3.87	+.4	.93	14	8.0	se.	26	se.	16	2	11	18	7.3	.0	.0	4
Charlotte [2]	779	63	86	987.5	1,015.2	−.4	67.9	−1.0	87	25	78	42	4	58	32	36	56	74	4.29	+.7	1.02	13	6.9	s.	20	w.	17	2	15	14	6.7	.0	.0	6
Greensboro [1]	886	6	56	983.7	1,015.2	.....	64.7	−1.7	83	25	76	37	9	54	35	77	56	80	4.92	+.9	1.53	14	7.8	sw.	26	nw.	12	5	13	13	6.4	.0	.0	7
Hatteras	11	5	50	1,014.9	1,015.6	−.7	68.8	+.1	80	25	74	56	8	64	17	9	64	88	4.63	+.9	2.00	15	12.5	sw.	30	n.	8	2	11	18	7.2	.0	.0	4
Raleigh [1]	376	5	69	1,001.7	1,015.2	−.4	67.6	−.9	89	25	78	43	4	57	30	41	58	79	5.67	+1.9	1.94	14	7.0	sw.	31	sw.	27	8	12	11	5.9	.0	.0	8
Wilmington	72	73	107	1,012.9	1,015.2	−1.1	70.4	−.4	85	19	78	51	5	63	27	9	62	82	4.22	+.8	1.45	11	10.2	s.	32	sw.	27	6	12	13	6.4	.0	.0	9
Charleston [2]	48	11	92	1,013.5	1,015.2	−1.1	73.0	+.3	85	19	79	60	5	67	18	0	64	84	4.52	+1.5	1.79	12	9.0	s.	29	sw.	20	7	11	13	6.1	.0	.0	6
Columbia, S. C. [2]	347	70	91	1,002.4	1,014.9	−1.0	71.2	−.7	88	25	81	52	5	62	30	10	60	74	3.39	+.3	1.70	10	7.7	s.	25	sw.	18	7	12	12	6.2	.0	.0	4
Greenville, S. C. [1]	1,040	18	36	978.0	1,014.9	.....	66.8	−.4	85	25	76	45	9	58	30	37	56	74	5.11	+1.1	1.92	12	8.8	sw.	28	n.	3	3	14	14	6.6	.0	.0	4
Augusta [2]	182	62	77	1,008.5	1,014.9	−.7	72.1	−.3	88	16	82	50	9	62	32	4	59	70	4.33	+1.3	1.64	10	5.6	s.	18	w.	18	6	11	14	6.3	.0	.0	5
Savannah [4]	65	73	152	1,013.2	1,015.2	−.7	74.0	+2.3	92	19	83	55	9	65	28	0	65	82	5.92	+2.9	1.84	15	9.1	se.	39	w.	18	2	12	17	7.0	.0	.0	9
Jacksonville [2]	43	86	110	1,013.9	1,015.2	−.7	76.1	+1.1	90	19	84	61	9	69	23	0	68	82	5.14	+1.1	1.26	17	7.8	s.	40	sw.	20	4	12	15	6.5	.0	.0	10
FLORIDA PENINSULA							79.6	+2.0										79	4.07	−0.5											6.0			
Key West [2]	21	10	64	1,013.9	1,014.6	−.3	82.0	+2.9	89	28	86	73	23	78	13	0	75	84	2.05	−1.5	1.26	9	8.6	se.	20	e.	31	3	23	5	5.5	.0	.0	5
Miami [2]	25	242	249	1,014.2	1,015.2	−.4	77.8	+.6	89	8	82	69	17	74	16	0	71	80	6.60	−.6	1.90	13	12.8	se.	30	se.	31	1	21	9	6.1	.0	.0	14
Tampa [1]	35	6	43	1,013.9	1,015.2	−.4	78.9	+2.6	91	14	87	67	9	71	21	0	70	80	3.55	+.6	1.38	11	9.8	w.	35	S.	15	3	16	12	6.5	.0	.0	13
EAST GULF							72.0	−0.4										80	7.49	+3.7											6.4			
Atlanta [1]	1,173	33	72	972.3	1,014.6	−1.0	68.4	−1.9	86	16	79	48	9	58	29	19	58	76	6.39	+3.0	1.70	16	10.0	nw.	42	w.	19	5	13	13	6.3	.0	.0	9
Macon [2]	370	79	87	1,001.4	1,014.9	−.7	71.2	−1.1	87	25	81	47	9	61	31	7	60	75	5.60	+2.6	1.56	14	5.5	se.	26	sw.	19	6	10	15	6.7	.0	.0	9
Thomasville	278	49	58	1,005.1	1,014.9	−.7	.....	...	...	...	...	55	10	64	.....	...	...	...	7.23	+3.6	2.87	15	.....	.....	.....	.....	.....	4	13	14	.....	.0	.0	12
Apalachicola	35	11	51	1,013.2	1,014.6	−.7	75.3	+.7	88	26	82	58	9	69	20	0	68	84	4.81	+1.4	2.27	10	8.0	se.	24	sw.	20	8	9	14	6.0	.0	.0	10
Pensacola	56	54	79	1,012.5	1,014.2	−1.4	74.0	+.1	86	5	81	56	9	67	23	0	66	82	12.56	+9.2	4.53	13	7.7	s.	29	nw.	11	5	15	11	6.1	.0	.0	12
Anniston	741	9	.....	.....	.....	.....	69.6	+.5	86	31	81	44	9	59	32	11	.....	...	4.53	+.6	.93	13	.....	sw.	.....	.....	.....	8	8	15	.....	.0	.0	8
Birmingham [1]	700	5	62	989.5	1,014.6	−.6	68.6	−.7	85	31	79	45	9	58	32	13	60	76	6.32	+2.4	1.23	14	7.4	se.	34	sw.	19	6	10	15	6.7	.0	.0	10
Mobile [2]	57	86	161	1,012.5	1,014.2	−1.4	74.2	−.2	88	18	82	55	9	66	24	0	66	83	8.55	+4.2	3.07	13	7.6	s.	42	n.	7	7	10	14	6.6	.0	.0	11
Montgomery [2]	218	92	105	1,006.4	1,013.5	−1.4	72.8	−.6	88	30	82	54	9	63	25	0	62	78	6.74	+2.9	2.53	14	6.5	se.	31	sw.	19	8	13	10	5.8	.0	.0	10
Meridian [2]	375	67	92	1,000.7	1,013.9	−1.3	70.9	−.4	88	30	81	49	9	61	31	3	62	78	8.48	+4.2	2.51	13	5.7	s.	21	sw.	15	9	8	14	6.0	.0	.0	12
Vicksburg [2]	247	82	102	1,004.4	1,013.2	−1.7	71.2	−1.7	88	2	80	55	8	63	24	2	63	86	9.53	+5.2	2.12	11	7.8	s.	30	se.	15	4	12	15	6.8	.0	.0	10
New Orleans	53	50	84	1,011.5	1,013.5	−1.4	76.0	+.6	87	30	83	64	9	69	20	0	68	82	9.18	+4.6	2.99	13	6.0	se.	26	ne.	12	3	12	16	6.9	.0	.0	14
WEST GULF							73.6	−0.2										80	9.51	+5.4											7.0			
Shreveport [1]	249	5	64	1,003.7	1,012.2	−2.0	71.5	−1.1	88	24	80	55	5	62	25	6	62	78	9.47	+5.2	2.58	17	9.0	se.	42	nw.	18	5	11	15	6.5	.0	.0	16
Fort Smith	463	57	82	995.6	1,011.9	−1.6	66.1	−3.5	88	30	76	42	12	56	30	50	58	76	8.55	+3.7	2.40	17	7.1	ne.	36	w.	2	5	11	15	6.6	.0	.0	15
Little Rock [1]	357	26	58	1,000.3	1,012.9	−1.3	67.4	−2.9	86	2	76	48	5	59	25	32	59	77	9.67	+4.9	5.11	12	7.6	se.	27	nw.	2	4	10	17	7.1	.0	.0	10
Austin [1]	605	10	41	989.5	1,010.8	.....	74.6	.0	92	17	83	54	11	66	26	6	66	78	6.13	+1.5	3.61	15	9.6	s.	47	ne.	31	1	13	17	7.5	.0	.0	10
Brownsville [1]	57	5	54	1,006.8	1,008.8	.....	81.8	+3.2	96	17	89	67	2	74	21	0	74	85	.52	−2.1	.30	6	11.7	se.	35	se.	4	0	20	11	7.0	.0	.0	4
Corpus Christi [1]	20	4	33	1,009.5	1,010.2	−2.3	79.2	+4.7	98	19	87	63	12	72	23	0	72	86	4.88	.....	2.70	9	12.0	se.	32	s.	24	1	13	17	7.2	.0	.0	11
Dallas [1]	512	5	45	993.2	1,011.5	.....	71.0	−1.9	91	23	81	49	12	61	29	18	60	75	12.60	+8.1	6.22	14	11.2	s.	45	s.	29	7	8	16	6.8	.0	.0	14
Fort Worth [1]	679	40	56	987.5	1,011.2	−1.7	69.7	−2.5	91	19	80	46	11	60	32	28	61	78	12.09	+7.4	5.04	15	11.4	se.	40	w.	28	7	10	14	6.4	.0	.0	14
Galveston [2]	54	106	114	1,009.8	1,011.9	−2.0	76.0	+1.2	85	26	80	64	13	71	16	0	70	85	8.85	+5.4	1.77	11	12.1	s.	36	n.	15	1	20	10	6.7	.0	.0	9
Houston [2]	138	157	190	1,006.4	1,011.5	.....	75.8	+.3	91	11	84	62	5	68	25	0	68	83	15.03	+10.5	4.54	13	10.8	se.	40	nw.	19	1	11	19	7.6	.0	.0	11
Palestine	510	64	72	994.2	1,012.2	−1.3	72.0	−.7	88	17	80	54	12	64	24	6	63	78	7.16	+2.6	2.23	15	7.4	s.	23	sw.	14	4	13	14	6.6	.0	.0	12
Port Arthur [2]	34	59	134	1,010.5	1,011.9	.....	76.0	+.8	87	26	83	61	13	69	21	0	68	84	20.87	+16.8	7.41	12	13.5	s.	49	e.	19	1	13	17	7.3	.0	.0	15
San Antonio [1]	693	8	51	986.1	1,010.5	−2.0	75.4	+.3	95	19	85	55	12	66	30	5	68	80	3.47	+.3	.81	12	9.4	se.	48	nw.	15	0	10	21	8.4	.0	.0	12

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR MAY 1946—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
OHIO VALLEY AND TENNESSEE	*Ft.*	*Ft.*	*Ft.*	*Mb.*	*Mb.*	*Mb.*	°*F.*	°*F.*	°*F.*		°*F.*	°*F.*		°*F.*	°*F.*		°*F.*	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
							62.4	−1.6										78	5.83	+2.1											7.4			
Chattanooga [1]	762	6	66	987.1	1,014.2	−1.4	67.2	+1.7	86	25	78	42	9	56	34	24	58	77	6.65	+2.9	2.52	17	7.3	s.	32	w.	16	3	9	19	7.1	.0	.0	12
Knoxville [1]	995	27	53	979.0	1,014.6	−2.3	66.5	−.2	85	25	77	44	9	56	33	36	56	76	6.40	+2.6	1.73	14	7.3	sw.	35	sw.	18	4	9	18	6.9	.0	.0	8
Memphis [4]	399	5	86	999.0	1,012.9	−1.7	67.3	−2.5	88	30	77	47	9	58	30	29	58	76	4.75	+.6	1.78	12	7.3	e.	27	nw.	2	6	7	18	6.7	.0	.0	9
Nashville [1]	546	5	72	994.2	1,013.9	−1.3	65.8	−2.4	84	30	76	44	9	56	31	56	56	77	3.73	−.1	.51	15	8.2	s.	23	nw.	7	5	9	17	6.7	.0	.0	8
Lexington [1]	989	4	28	978.3	1,013.9	−1.7	62.2	−2.1	81	31	71	41	5	53	29	122	54	80	6.71	+2.9	2.06	19	----	s.	----	----	----	4	7	20	7.3	.0	.0	8
Louisville [1]	525	106	120	994.2	1,013.2	−2.0	63.0	−2.1	82	31	72	40	5	54	32	105	54	76	5.11	+1.4	1.26	18	7.8	sw.	25	n.	27	2	8	21	7.8	.0	.0	6
Evansville [1]	431	11	40	997.6	1,012.9	−2.0	62.0	−2.3	83	30	72	41	8	52	29	122	56	82	7.39	+3.5	1.88	16	7.5	sw.	33	sw.	24	5	6	20	7.4	.0	.0	7
Indianapolis [1]	823	5	54	983.4	1,012.9	−2.0	59.2	−2.2	80	15	68	37	8	50	29	188	51	78	7.13	----	2.02	21	9.9	e.	27	nw.	7	3	7	21	7.6	.0	.0	3
Terre Haute [2]	575	68	149	992.6	1,013.2	----	60.9	−3.3	81	15	69	42	13	53	28	148	52	80	11.53	+7.7	2.37	20	9.2	s.	31	sw.	24	5	8	18	7.5	.0	.0	6
Cincinnati [2]	627	11	51	990.9	1,013.5	−2.1	63.1	.0	84	31	72	43	8	54	30	90	54	80	6.12	+2.4	1.84	17	6.5	e.	23	w.	4	2	7	22	7.6	.0	.0	9
Columbus [2]	822	90	110	988.4	1,013.5	−1.7	60.2	−2.1	83	31	69	38	13	52	29	169	50	76	4.31	+.7	.84	18	9.9	s.	25	sw.	25	5	8	18	7.3	.0	.0	6
Dayton [1]	1,003	6	55	977.7	1,013.9	----	58.5	−3.3	80	31	67	34	13	50	29	214	50	80	4.85	+1.2	.99	16	11.4	s.	24	sw.	24	3	8	20	7.7	.0	.0	5
Elkins [1]	1,947	4	45	946.2	1,014.9	−1.0	57.8	+.1	84	25	69	37	30	47	41	234	51	82	5.31	+1.3	.94	20	6.5	se.	28	w.	16	2	6	23	7.8	.0	.0	4
Parkersburg	637	77	84	990.9	1,013.9	−1.7	62.7	−1.1	84	31	72	42	13	53	35	116	52	76	4.66	+1.3	.99	22	6.0	se.	22	nw.	6	2	9	20	7.4	.0	.0	8
Pittsburgh [1]	842	39	54	983.7	1,013.9	−1.7	59.9	−.3	83	25	70	39	4	50	32	183	48	71	4.10	+.9	1.05	17	9.9	s.	29	nw.	9	4	6	21	7.4	.0	.0	3
LOWER LAKES																																		
							55.9	−0.9										69	4.52	+1.3										6.9			
Buffalo [1]	768	34	96	986.1	1,014.2	−.7	55.0	−.9	83	23	65	34	3	45	34	312	44	70	3.59	+.5	1.28	13	13.5	sw.	35	sw.	21	7	9	15	6.5	.0	.0	4
Canton	448	10	61	997.3	1,013.2	----	52.8	−1.4	79	24	63	27	3	43	38	387	41	65	4.61	+1.6	2.07	16	9.0	w.	29	w.	9	8	4	19	6.5	.0	.0	3
Oswego	335	71	85	1,002.0	1,014.6	−.3	53.6	−.1	80	24	62	35	3	45	30	355	42	66	2.89	−.2	.84	13	9.0	w.	22	w.	6	10	9	12	5.7	.0	.0	2
Rochester [1]	523	5	69	995.3	1,014.6	−.3	55.6	−.5	83	25	66	32	10	45	38	309	42	66	2.82	−.1	.75	14	10.9	sw.	39	w.	9	5	9	17	6.7	.0	.0	2
Syracuse [1]	596	5	57	992.6	1,014.6	−.6	55.9	−.4	85	25	67	28	3	45	36	299	45	69	2.43	−.6	.98	17	9.8	sw.	40	w.	9	6	6	19	7.0	.0	.0	0
Erie [2]	714	57	81	988.2	1,014.2	−1.0	56.1	−.7	79	31	64	38	8	49	30	288	46	74	7.68	+4.3	2.84	18	8.8	ne.	34	se.	4	7	8	16	6.8	.0	.0	2
Cleveland [1]	762	27	54	986.1	1,013.9	−1.3	57.7	−.4	83	31	67	39	10	48	37	242	47	70	5.06	+1.9	1.07	16	10.9	se.	32	w.	5	3	10	18	7.3	.0	.0	2
Sandusky	629	5	67	990.9	1,013.9	−1.3	58.2	−1.0	84	31	67	39	12	50	31	232	----	----	6.73	+3.6	2.55	17	9.0	sw.	27	sw.	31	7	5	19	6.7	.0	.0	6
Toledo [1]	628	5	47	990.5	1,013.5	−1.4	56.6	−1.4	81	30	67	30	13	46	34	268	46	72	3.45	.0	.91	14	12.0	sw.	37	ne.	3	4	7	20	7.5	.0	.0	4
Fort Wayne [1]	857	5	33	982.1	1,013.2	----	56.6	−2.6	80	15	67	28	13	46	33	275	47	74	4.35	+.5	1.81	13	8.8	sw.	26	w.	5	4	8	19	7.4	.0	.0	4
Detroit [1]	730	5	78	987.5	1,013.9	−1.0	56.6	−.3	81	30	67	34	13	46	35	273	44	67	5.08	+1.9	1.98	11	10.1	ne.	33	w.	5	4	9	18	7.3	.0	.0	3
UPPER LAKES																																		
							51.3	−1.2										68	3.40	+0.2										6.7			
Alpena	609	5	89	991.5	1,013.9	−1.0	48.6	−1.9	80	30	57	30	13	41	35	509	38	67	3.24	+.2	1.22	11	11.7	nw.	33	nw.	9	4	12	15	6.8	T	.0	1
Escanaba	612	51	72	991.5	1,013.9	−1.0	48.6	−1.0	70	29	56	32	12	41	26	504	38	68	4.03	+1.1	1.24	11	11.3	s.	31	n.	31	2	16	13	7.1	T	.0	2
Grand Rapids [2]	707	70	244	987.8	1,013.5	−1.4	56.4	−1.6	81	23	66	36	12	46	36	278	42	66	3.28	−.2	.83	12	11.5	ne.	36	sw.	24	5	9	17	6.5	.0	.0	3
Lansing [2]	878	5	90	981.7	1,013.9	----	54.3	−2.6	81	31	65	30	12	44	41	337	42	66	3.93	+.5	.82	13	8.8	sw.	22	w.	5	4	9	18	7.1	.0	.0	4
Marquette	734	44	73	986.8	1,014.2	−.7	48.1	−.9	79	28	57	30	12	39	45	523	37	69	2.89	−.1	1.38	12	7.8	n.	37	s.	13	4	10	17	6.9	T	.0	0
Sault Sainte Marie [1]	614	11	52	991.2	1,013.9	−.3	47.2	−1.0	75	28	58	25	13	37	37	548	38	73	3.91	+1.3	1.74	15	11.4	nw.	34	se.	4	4	12	15	7.0	1.5	.0	2
Chicago [1]	673	5	36	988.8	1,013.2	−1.4	56.9	−.9	84	30	67	37	13	47	34	264	45	69	3.54	.0	.83	14	9.4	s.	26	w.	5	5	9	17	7.0	.0	.0	3
Green Bay	617	5	32	990.9	1,013.5	−.7	52.6	−2.3	80	29	63	31	8	42	37	387	40	66	4.33	+.8	.97	12	8.5	n.	26	w.	5	5	12	14	6.5	T	.0	5
Milwaukee [1]	681	33	66	988.5	1,013.5	−1.1	52.6	.0	80	30	62	33	13	43	35	385	41	68	2.14	−1.2	.95	8	12.8	n.	40	sw.	24	4	13	14	6.6	.0	.0	4
Duluth [2]	1,133	5	47	972.9	1,014.6	.0	47.3	.0	81	26	57	23	11	38	38	548	35	66	2.69	−.6	.97	13	12.3	ne.	39	e.	31	11	5	15	5.7	T	.0	1
NORTH DAKOTA																																		
							51.3	−2.4										70	1.60	−0.7										7.0			
Fargo [1]	940	6	47	979.3	1,013.9	.0	51.8	−3.3	86	28	63	17	12	40	41	432	39	67	2.04	−.8	1.12	11	13.0	n.	33	s.	28	4	11	16	6.8	.5	.0	2
Bismarck [1]	1,677	5	43	953.3	1,013.9	+.7	51.6	−1.4	82	26	63	25	7	40	42	432	36	60	1.93	−.4	.56	9	13.2	ne.	36	s.	28	5	7	19	7.3	1.2	.0	4
Devils Lake	1,478	11	44	960.7	1,014.6	+.7	50.9	−1.7	83	26	62	20	12	40	43	452	36	62	.92	−1.1	.17	10	9.6	n.	26	n.	9	4	10	17	6.8	5.5	.0	2
Grand Forks [1]	832	4	41	983.7	1,014.6	----	51.0	----	87	28	64	18	12	39	46	451	38	66	1.68	----	.46	10	----	nw.	----	----	----	5	6	20	----	T	.0	1
Williston	1,878	42	50	946.5	1,013.9	+.4	51.0	−3.0	85	26	63	23	11	39	43	447	34	60	1.53	−.5	.54	11	7.9	n.	26	nw.	9	5	8	18	7.0	T	.0	4
UPPER MISSISSIPPI																																		
							58.3	−3.0										71	4.41	+0.3										6.8			
Minneapolis-St. Paul. [1]	919	43	74	979.3	1,012.9	−1.0	55.2	−2.5	86	28	66	27	11	44	35	320	40	64	3.04	−.6	1.95	9	11.5	nw.	35	sw.	13	5	12	14	6.5	3.0	.0	3
Springfield, Minn	1,025	4	42	975.6	1,012.9	----	55.0	----	84	28	66	23	11	44	34	320	42	68	2.75	----	1.02	11	----	nw.	----	----	----	9	9	13	----	T	.0	2
La Crosse [1]	714	5	29	986.8	1,013.2	−.7	55.0	−2.9	83	27	66	28	11	43	39	316	42	66	2.96	−.8	1.49	12	8.9	n.	28	s.	13	4	14	13	6.6	T	.0	5
Madison [2]	974	70	78	978.0	1,013.2	−1.4	55.8	−1.8	82	27	65	34	11	46	31	291	42	66	1.80	−2.0	.81	10	8.2	nw.	24	e.	3	4	13	14	6.6	T	.0	1
Charles City	1,015	10	51	976.6	1,013.2	−.7	54.6	−3.2	81	28	65	29	11	44	35	327	----	----	3.80	−.5	1.08	13	6.5	n.	32	s.	13	8	12	11	5.9	.0	.0	3
Moline [1]	606	6	50	990.9	1,013.5	−.7	57.8	−2.5	83	30	68	37	12	48	35	233	48	71	4.10	+.2	1.04	16	9.7	e.	32	e.	3	4	11	16	7.2	.0	.0	5
Des Moines [2]	860	5	99	982.1	1,013.2	−.3	58.2	−3.1	83	28	68	32	11	48	33	224	48	74	3.05	−1.5	1.05	13	10.0	se.	31	e.	2	5	8	18	7.1	.0	.0	5
Dubuque	699	60	79	987.5	1,012.9	−1.3	57.5	−2.8	84	27	68	34	4	47	36	240	45	66	2.12	−2.1	.78	11	5.9	nw.	21	e.	3	6	10	15	6.4	T	.0	6
Burlington [1]	702	4	36	987.5	1,012.9	−1.0	57.9	−4.7	84	30	68	36	11	48	32	237	50	76	4.66	+.5	1.36	12	10.1	nw.	33	w.	30	5	8	18	6.8	.0	.0	6
Cairo	357	5	99	1,000.3	1,012.9	−1.7	65.7	−3.7	83	30	74	48	5	57	27	51	----	----	11.15	+7.4	5.53	14	7.5	sw.	33	se.	23	7	6	18	7.0	.0	.0	7
Peoria [1]	609	6	26	990.9	1,013.2	−1.4	58.2	−2.5	83	30	68	35	8	49	32	231	50	76	5.06	+1.0	1.37	19	9.7	e.	28	e.	3	3	12	16	7.3	.0	.0	1
Springfield, Ill. [2]	636	5	191	989.8	1,012.5	−1.7	61.2	−2.0	83	30	70	42	12	53	29	147	52	79	5.59	+1.2	1.22	17	11.3	s.	29	e.	1	3	9	19	7.4	.0	.0	1
St. Louis [2]	568	35	303	992.6	1,012.9	−1.3	62.5	−4.5	80	30	70	43	11	62	----	112	----	74	5.58	+1.2	2.22	17	11.5	s.	33	sw.	24	6	6	19	----	.0	.0	6
MISSOURI VALLEY																																		
							58.8	−3.1										72	4.15	+0.1										6.5			
Columbia, Mo. [2]	784	6	66	984.4	1,012.2	−1.7	61.4	−3.6	81	28	72	38	12	51	32	144	51	76	6.34	+1.9	1.83	17	6.5	s.	18	se.	15	8	14	9	5.4	.0	.0	10
Kansas City [1]	963	39	76	977.3	1,012.2	−1.0	62.2	−2.6	87	30	72	37	11	53	31	136	50	68	2.87	−1.1	1.35	10	9.9	nw.	32	s.	23	9	10	12	6.3	.0	.0	6
St. Joseph [2]	967	11	49	977.3	1,012.2	----	60.5	−3.7	85	30	70	33	11	51	30	171	51	76	5.23	+.5	1.48	13	8.1	nw.	21	nw.	10	11	12	8	5.2	.0	.0	7
Springfield, Mo. [1]	1,324	5	60	965.8	1,012.9	−.6	60.8	−2.9	84	24	71	37	12	51	29	151	52	78	7.09	+1.9	2.24	17	11.2	s.	38	w.	2	4	14	13	6.7	.0	.0	12
Topeka	987	65	87	977.0	1,012.5	----	62.0	−2.3	86	30	73	35	11	51	33	136	50	70	3.37	−1.1	1.22	13	8.5	s.	26	se.	23	6	7	18	7.0	.0	.0	6
Lincoln [2]	1,189	11	81	969.9	1,012.2	−.7	58.8	−2.9	86	18	70	31	11	48	38	218	46	70	2.33	−1.8	1.22	13	9.5	n.	31	w.	30	4	11	16	7.1	.0	.0	5
Omaha [1]	1,105	5	68	972.6	1,012.2	−1.0	59.2	−3.2	84	18	70	31	11	48	37	198	46	68	3.53	−.2	1.62	14	11.8	n.	40	w.	23	3	13	15	6.9	T	.0	7
Valentine	2,598	46	54	921.1	1,012.9	+.4	52.6	−3.6	83	22	64	25	11	41	41	391	38	66	3.05	+.2	1.47	11	10.3	n.	34	se.	28	6	10	15	6.5	T	.0	2
Sioux City [1]	1,138	5	40	971.2	1,012.2	−1.0	56.6	−3.1	82	28	68	27	11	45	37	267	46	74	5.96	+1.9	1.43	16	11.0	n.	33	sw.	18	4	12	15	7.1	.4	.0	6
Huron [1]	1,301	5	41	966.1	1,012.9	−.3	53.7	−2.7	84	22	67	20	11	41	45	366	42	71	1.71	−1.3	.50	11	13.5	nw.	36	se.	29	6	5	20	7.0	.0	.0	3
NORTHERN SLOPE																																		
							51.0	−2.1										62	3.11	+0.8										6.8			
Billings [1]	3,570	16	40	890.3	1,013.9	----	52.2	−3.9	82	27	64	26	10	41	36	396	36	61	1.09	----	.45	10	11.0	ne.	35	nw.	27	4	10	17	7.1	T	.0	4
Havre	2,507	11	67	926.2	1,015.2	+2.7	52.0	−1.4	83	27	65	19	10	39	42	409	34	58	1.16	−.9	.25	13	7.8	e.	45	nw.	17	7	9	15	6.5	T	.0	3
Helena [1]	4,124	5	43	873.0	1,015.2	+1.7	50.2	−1.4	78	4	62	23	10	38	45	458	36	64	2.40	+.4	.65	13	9.3	w.	42	n.	17	5	7	19	6.9	T	.0	5
Missoula [1]	3,263	4	32	901.1	1,015.2	----	53.2	+1.0	78	25	67	24	1	40	43	367	34	55	.36	−1.4	.19	6	8.4	se.	30	s.	7	6	13	12	6.0	.0	.0	0
Kalispell	2,973	48	56	910.6	1,013.5	+1.6	52.0	+.6	80	26	64	27	10	40	39	401	36	60	1.40	−.1	.60	7	6.4	w.	25	ne.	8	9	12	10	5.3	T	.0	4
Miles City [1]	2,371	5	78	929.6	1,013.9	+1.0	52.8	----	87	27	66	24	10	40	40	388	36	60	3.32	----	1.05	11	----	nw.	----	----	----	5	9	17	6.9	.0	.0	3
Rapid City [1]	3,259	5	63	899.4	1,013.2	+.7	50.0	−4.0	79	26	61	25	11	39	40	466	39	70	7.35	+4.4	2.48	13	17.2	nw.	49	nw.	1	3	10	18	7.3	T	.0	5
Cheyenne [1]	6,094	5	40	810.7	1,012.5	+1.7	46.0	−4.3	72	27	57	18	11	35	40	592	34	72	4.15	+1.7	1.26	16	11.1	nw.	37	nw.	2	3	6	22	7.5	8.6	.0	4
Lander	5,352	60	68	833.4	1,012.9	+1.0	48.8	−2.4	76	22	62	19	11	36	39	498	37	54	3.11	+.8	1.21	10	5.4	sw.	27	n.	5	5	8	18	6.9	11.1	.0	3
Sheridan [1]	3,790	5	38	883.2	1,014.2	----	50.1	−1.9	76	27	61	30	11	39	42	460	37	66	4.46	+1.8	1.64	15	9.6	nw.	37	nw.	9	3	8	20	7.6	.5	.0	4
North Platte [2]	2,821	11	51	913.6	1,012.2	+.4	55.0	−3.7	87	22	67	27	11	43	39	316	41	68	3.63	+.8	1.59	13	8.7	n.	24	se.	27	3	12	16	7.0	T	.0	6

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR MAY 1946—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
MIDDLE SLOPE	*Ft.*	*Ft.*	*Ft.*	*Mb.*	*Mb.*	*Mb.*	°F.	°F.	°F.		°F.	°F.		°F.	°F.		°F.	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
							59.9	−3.2										67	3.03	−0.6											6.3			
Denver [3]	5,292	106	113	835.4	1,011.9	+1.4	52.0	−4.2	77	27	62	27	10	42	35	407	36	62	1.67	−.5	.48	13	7.8	s.	36	n.	2	5	7	19	7.0	.5	.0	7
Pueblo [1]	4,690	5	36	854.0	1,011.2	+1.0	56.0	−2.9	84	22	70	27	11	42	42	278	36	60	1.34	−.3	.51	13	8.9	se.	35	se.	27	7	9	15	6.6	4.8	.0	7
Concordia	1,392	50	58	963.1	1,012.9	.0	58.6	−4.6	80	28	69	32	11	48	31	211	46	69	2.55	−1.6	.92	14	8.4	nw.	23	se.	28	8	7	16	6.6	.0	.0	6
Dodge City [1]	2,509	5	58	924.5	1,011.5	.0	60.0	−3.5	89	9	74	28	11	46	39	189	44	64	1.56	−1.3	1.20	8	17.4	se.	45	s.	22	7	14	10	5.6	.0	.0	5
Wichita [1]	1,358	6	64	964.1	1,011.9	−.6	61.9	−3.2	89	23	73	33	11	51	32	136	48	66	2.11	−2.4	.70	9	14.2	se.	42	se.	28	9	9	13	6.1	.0	.0	8
Oklahoma City [3]	1,214	10	47	968.8	1,011.5	−.7	66.0	−1.7	91	23	77	39	11	55	43	58	52	70	6.92	+2.0	2.14	14	9.0	s.	31	s.	22	8	10	13	5.8	.0	.0	8
Tulsa [1]	674	10	60	987.8	1,011.9	-----	64.7	−2.5	87	24	75	42	12	54	35	70	56	76	5.08	.0	.84	21	10.2	s.	35	e.	29	4	19	8	6.1	.0	.0	16
SOUTHERN SLOPE																																	
							69.4	−0.3										59	[7]1.76	−0.9										5.6			
Abilene [1]	1,738	4	59	949.9	1,009.8	−1.7	71.0	+.4	97	24	82	43	11	60	38	27	56	66	3.12	−.8	1.22	9	15.7	s.	48	s.	29	3	14	14	6.7	.0	.0	13
Amarillo [1]	3,676	5	42	885.9	1,009.5	−1.0	62.4	+.3	90	9	77	34	11	48	38	132	44	58	.82	−2.0	.32	7	15.6	s.	49	se.	27	13	13	5	4.4	.0	.0	7
Del Rio	960	63	71	975.6	1,008.1	−2.7	76.8	−.2	98	19	85	60	12	68	31	1	66	74	2.83	.0	1.13	13	8.8	se.	28	ne.	25	3	11	17	7.5	.0	.0	15
Roswell	3,566	75	85	889.3	1,009.1	−.7	67.6	−1.8	92	27	82	42	11	53	41	38	36	38	.28	−.8	.21	2	9.1	s.	30	nw.	8	15	10	6	4.0	.0	.0	2
SOUTHERN PLATEAU																																	
							69.0	+0.9										33	0.33	0.0										2.7			
El Paso [1]	3,778	39	85	882.2	1,007.1	−1.4	71.6	+1.6	93	26	84	52	4	59	34	5	36	32	1.23	+.9	1.02	3	13.1	w.	43	nw.	4	20	8	3	3.3	.0	.0	5
Albuquerque [1]	5,314	5	45	834.4	1,007.1	-----	64.0	+.7	85	26	78	39	13	50	36	76	29	34	.31	−.3	.27	3	12.4	sw.	40	s.	27	11	17	3	4.3	.0	.0	4
Flagstaff	6,907	36	51	788.4	1,012.2	+3.7	51.2	+.5	77	6	68	27	1	34	48	426	24	42	.46	−.4	.31	2	----	w.	--	-----	--	18	10	3	3.5	T	.0	2
Phoenix [3]	1,107	39	87	969.2	1,007.5	−1.0	76.7	+1.7	99	5	92	58	13	62	37	0	34	28	.00	−.1	.00	0	7.2	e.	25	w.	22	26	3	2	2.1	.0	.0	0
Tucson [1]	2,555	5	39	921.8	1,008.1	-----	73.0	−.2	95	25	89	49	17	57	42	0	30	24	.00	−.2	.00	0	----	w.	--	-----	--	26	4	1	2.1	.0	.0	0
Yuma	142	9	54	1,002.7	1,007.5	−1.3	77.4	+1.2	104	5	94	57	28	61	43	0	40	36	.00	.0	.00	0	6.3	w.	23	sw.	27	28	3	0	1.1	.0	.0	0
MIDDLE PLATEAU																																	
							56.6	+1.6										47	1.16	+0.1										5.4			
Reno [1]	4,527	20	52	860.1	1,012.2	+.7	55.7	+2.8	86	17	74	26	1	37	52	289	34	50	.17	−.5	.15	3	7.8	n.	34	w.	20	15	9	7	4.7	T	.0	1
Winnemucca	4,339	5	56	865.6	1,012.2	+.7	55.2	+1.3	84	3	71	30	11	39	47	304	31	47	1.55	+.7	.68	8	7.2	ne.	29	sw.	7	12	6	13	5.4	T	.0	2
Modena	5,473	10	46	830.0	1,008.8	−1.0	54.2	+.7	82	5	71	26	1	37	45	339	----	----	.31	−.5	.23	3	10.2	w.	--	-----	--	11	12	8	4.8	.0	.0	2
Salt Lake City [1]	4,227	32	58	863.5	1,009.8	−1.4	57.1	+1.4	81	7	69	27	1	45	40	252	34	46	2.59	+.8	.96	9	9.5	se.	32	sw.	21	8	11	12	5.9	.0	.0	2
Grand Junction [3]	4,602	60	68	856.4	1,012.2	+2.0	59.9	-----	84	8	73	32	1	46	35	179	32	44	1.25	-----	.65	5	7.1	se.	34	sw.	27	5	11	15	6.3	.2	.0	5
NORTHERN PLATEAU																																	
							57.6	+1.7										54	1.48	+0.1										6.4			
Baker [1]	3,471	36	54	893.7	1,013.9	−.7	53.4	+1.7	80	3	67	24	1	40	44	364	35	61	2.64	+1.0	1.19	9	6.2	n.	22	n.	9	14	5	12	5.2	.0	.0	3
Boise [1]	2,739	5	49	916.7	1,011.9	−2.0	57.6	+1.5	84	3	71	29	1	44	40	230	34	49	.55	−.9	.20	7	10.1	nw.	28	se.	7	8	10	13	5.5	.0	.0	0
Pocatello [1]	4,478	5	31	860.5	1,112.5	+.3	52.8	−.2	81	4	66	23	11	39	43	379	31	51	1.86	+.1	1.21	9	10.1	sw.	35	sw.	22	5	10	16	6.7	T	.0	5
Spokane [1]	1,929	27	42	945.1	1,013.5	−1.1	57.0	+1.5	81	3	71	30	1	43	43	244	38	56	1.43	.0	.98	6	7.3	ne.	31	w.	28	6	15	10	5.5	.0	.0	3
Walla Walla	991	57	65	978.7	1,014.2	−.4	61.0	+1.4	84	17	73	34	1	49	36	137	----	----	1.78	+.2	1.16	8	5.1	s.	23	ne.	9	14	10	7	4.2	.0	.0	2
Yakima	1,076	58	67	975.3	1,014.2	-----	63.5	+4.5	87	3	76	36	1	51	46	81	----	----	.55	−.1	.22	8	7.6	nw.	24	n.	21	16	5	10	4.7	.0	.0	3
NORTH PACIFIC COAST																																	
							57.8	+3.2										70	1.12	−1.2										5.8			
North Head	211	5	55	1,009.5	1,016.9	.0	53.0	+2.1	77	1	58	45	30	48	31	369	48	84	1.56	−1.4	.94	10	13.6	n.	34	n.	16	2	7	22	8.0	.0	.0	0
Seattle [3]	125	90	321	1,011.9	1,016.3	.0	59.9	+3.3	82	19	69	44	1	50	37	166	45	66	.36	−1.5	.26	3	8.1	n.	24	sw.	21	15	7	9	4.4	.0	.0	0
Tacoma	194	172	201	1,009.1	1,015.9	−.7	58.5	+4.4	79	19	68	43	30	50	31	203	----	----	.46	−1.7	.19	5	8.2	n.	30	sw.	7	14	7	10	4.5	.0	.0	1
Tatoosh Island	86	9	61	1,013.9	1,016.9	+.6	52.2	+2.6	68	2	57	43	18	47	24	398	47	85	.64	−3.4	.20	7	11.0	w.	46	e.	1	3	13	15	7.1	.0	.0	0
Medford [1]	1,329	29	58	967.2	1,014.6	-----	60.8	+2.6	92	1	77	35	1	44	57	146	40	56	.96	−.1	.64	6	----	n.	--	-----	--	10	16	5	4.6	.0	.0	1
Portland, Oreg. [3]	154	68	106	1,010.5	1,016.3	−.6	61.2	+4.3	85	19	70	45	5	52	32	137	46	66	1.19	−1.0	.61	8	5.8	nw.	24	e.	1	10	3	18	6.4	.0	.0	0
Roseburg	510	45	76	997.3	1,015.9	−1.0	59.2	+3.2	86	1	72	37	1	46	49	186	44	64	2.64	+.7	1.18	8	4.3	n.	19	n.	12	9	13	9	5.4	.0	.0	0
MIDDLE PACIFIC COAST																																	
							60.2	+0.6										67	0.61	−0.5										5.1			
Eureka	60	72	88	1,015.2	1,017.6	.0	52.4	+.4	66	3	57	44	1	48	21	393	48	84	1.26	−.5	.48	7	7.4	n.	24	nw.	8	3	11	17	7.4	.0	.0	0
Red Bluff	353	5	26	999.3	1,011.9	-----	68.8	+2.5	96	6	83	46	1	55	43	29	40	42	.20	−.9	.19	2	8.2	se.	28	nw.	20	19	5	7	4.0	.0	.0	0
Sacramento	66	92	115	1,010.2	1,012.5	−1.4	64.1	+.8	94	6	77	46	3	51	39	70	46	61	.61	−.2	.54	3	8.4	sw.	21	s.	20	20	7	4	3.1	.0	.0	0
San Francisco [3]	155	112	132	1,009.5	1,015.2	−.4	55.6	−1.2	79	6	60	49	30	51	26	293	48	82	.37	−.4	.33	3	10.7	w.	30	w.	20	9	10	12	6.0	.0	.0	0
SOUTH PACIFIC COAST																																	
							64.4	+0.9										65	0.36	0.0										5.6			
Fresno [1]	327	5	34	1,000.0	1,011.9	−1.3	68.5	+1.3	97	6	84	48	21	53	40	16	46	51	1.02	+.6	.94	3	8.1	nw.	24	nw.	21	17	10	4	3.6	.0	.0	1
Los Angeles	338	223	250	1,002.0	1,014.2	.0	61.1	−1.1	79	31	68	50	17	54	24	126	51	74	.04	−.4	.02	3	6.1	w.	17	w.	24	6	10	15	6.4	.0	.0	0
San Diego [1]	87	20	55	1,011.2	1,014.2	.0	63.7	+2.4	77	30	69	51	17	58	18	48	52	70	.01	−.3	.01	1	7.7	w.	17	nw.	12	4	12	15	6.7	.0	.0	0
PANAMA CANAL																																	
(April 1946)																																	
Balboa Heights	118	6	92	-------	[5]1,010.5	+.3	83.4	+1.2	97	28	92	70	2	75	23	0	72	[8]73	.91	−1.9	.87	2	9.0	n.	23	nw.	17	2	21	7	5.8	.0	.0	0
Cristobal	23	37	92	-------	[5]1,011.9	+.7	81.6	−.1	87	17	85	77	22	78	9	0	73	[8]77	.55	−3.5	.13	17	14.7	ne.	24	ne.	23	2	24	4	5.7	.0	.0	0
ALASKA																																	
Anchorage [1]	182	6	44	1,010.5	1,015.6	-----	44.8	−.2	67	10	54	27	2	36	34	628	34	69	1.23	+.7	.50	13	6.5	n.	28	s.	16	2	5	24	8.2	.0	.0	0
Fairbanks [1]	455	5	63	995.6	1,012.9	-----	48.4	+1.4	76	31	60	27	2	37	33	515	35	64	1.29	+.6	.17	10	7.2	sw.	34	sw.	16	1	12	18	7.5	T	.0	1
Juneau [1]	80	6	30	1,015.6	1,018.6	-----	49.3	-----	70	23	60	30	18	39	36	491	38	68	1.25	-----	.42	10	7.4	n.	27	se.	15	6	6	19	6.7	.0	.0	0
Nome	22	25	56	1,011.2	1,011.9	-----	34.6	+.4	61	31	41	6	1	28	28	946	31	88	.85	−.2	.42	11	12.1	n.	55	e.	1	2	7	22	7.6	5.8	.0	0
Barrow	29	5	27	1,019.0	1,019.3	-----	20.2	+.5	37	2	26	−2	1	15	26	1,388	20	98	.06	−.1	.03	5	----	ne.	41	-----	5	2	6	23	8.4	.9	4.9	0
Ketchikan	75	69	90	1,017.6	1,018.3	-----	52.4	+3.8	77	9	62	34	17	43	33	389	40	69	2.51	−6.0	1.02	18	6.6	s.	22	nw.	21	5	7	19	7.1	.0	.0	0
Kotzebue	20	5	31	1,012.5	1,013.2	-----	31.0	+1.3	56	27	38	4	6	24	32	1,055	28	90	.25	+.1	----	6	10.5	ne.	42	se.	1	2	8	21	7.5	1.7	T	0
McGrath	341	5	31	999.7	1,012.5	-----	43.4	−.4	69	31	52	21	7	35	30	670	36	75	1.37	+.1	.34	16	----	s.	26	s.	4	0	4	27	9.1	T	.0	0
Northway	1,718	5	32	951.2	1,014.6	-----	47.2	-----	68	31	59	26	2	36	27	553	34	56	1.91	-----	----	7	6.2	w.	25	-----	6	4	8	19	7.0	.0	.0	0
HAWAII																																	
Honolulu	38	86	100	1,014.6	1,015.9	-----	75.2	+.4	83	20	80	64	4	70	----	0	----	----	.16	−1.6	.08	12	8.6	ne.	24	sw.	5	8	17	6	4.9	.0	.0	0

[1] Data are airport records.
[2] Barometric data (adjusted to old city elevation) and hygrometric data from airport; otherwise city office records.
[3] Observations taken hourly.
[4] Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
[5] Temperature and precipitation from city records, other data from airport.

NOTE.—Except as indicated by notes [1] [2] [4] and [5] data in table are city office records.

SEVERE LOCAL STORMS FOR MAY 1946

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	May 1946						
El Paso, Tex., and vicinity	4				$15,000	Hail and wind	Thousands of acres of crops lost; barn blown down.
Roger Mills County, Okla	7	4 p. m.	1,700		5,000	Hail	Loss in crops.
Roswell, N. Mex	8	do	[1] 2		5,000–10,000	do	400 acres of cotton to be replanted; alfalfa also damaged.
Harper County, Okla	9	5 p. m.	[1] 3		25,000	do	Loss in crops; path 6 miles long.
Wallace County, Kans., western portion.	9	6:30 p. m., M. S. T.	[1] 2		250,000	Heavy hail	Loss in crops, principally wheat; path 30 miles long.
Stafford to Zenith, Kans., vicinities of.	9	8 p. m.	[1] 4		112,000	do	Loss in crops; some fields, total loss; path 6 miles long.
Erie, Colo	9	12:10 p. m.	[1] 1		9,000	Hail	Considerable damage to alfalfa, grain, and property.
Arriba, Colo., 3 miles northwest.	9	2:45 p. m.			5,000	do	Loss in about 500 acres of wheat.
Fruitvale, Clifton, Orchard, and Mesa, Colo.	10	1–2 p. m.	[1] 10		1,000,000	do	50 percent of peach crop lost; much loss in other fruits and truck. 20 percent of tomatoes had to be reset.
Eufaula, Okla., vicinity of	10	7:45 p. m.	850–1,700	1	30,000	Tornado and hail	Loss in crops, $5,000; property damage, $25,000. 2 persons injured; 11 buildings destroyed; path 10 miles long.
Atoka, Okla., 12 miles east	10	8:30 p. m.	[1] 3		10,000	Hail	Crop loss, $8,000; property damage, $2,000; path 10 miles long.
Washington, D. C	11	1:30–3 p. m.				High wind	Several boats capsized; all passengers rescued.
Laredo, Tex	11	3 p. m.			29,100	Hail	Chief loss in cantaloupe crop.
Cherokee County, Tex., north-central portion.	11	P. m.	[1] 2		400,000	do	Loss in crops, $390,000; property damage, $10,000.
Grapeland, Tex	12	6:45 p. m.	[1] 3		400,000	do	$250,000 loss in fruit and truck; $150,000 property damage.
Lindale and Kilgore, Tex	12	7 p. m.	[1] 2		200,000	do	Crop loss, $170,000; property damage, $30,000.
Hawkins, Tex	12	7:40 p. m.	[1] 4		30,000	do	Property damage, $25,000; crop loss, $5,000.
Nacogdoches, Tex	12	11 p. m.			30,000	do	Light to moderate damage to fruit, truck, corn, and cotton.
Quitman, Tex	13	5:20 p. m.	[1] 3		21,300	do	Loss in fruit, truck, and corn, $15,000; property damage, $6,300.
Washington, D. C	13	P. m.				Thunderstorms	At 1:30 p. m., a 16-foot sailboat capsized off Hains Point. The occupants were rescued almost at once by a harbor patrol boat. A second boat turned over about an hour later and the couple rescued. At 2:15 p. m., a sailboat overturned, with no loss of life.
Bon Wier, Okla	13	About midnight.			2,500	Hail	Loss in fruit and truck.
Alva, Okla., vicinity of	14	4 p. m.			30,000	do	Path from west to east; loss in small grains, orchards, and gardens.
Kearney County, Nebr., western and central portions.	14	4–6:30 p. m., C. S. T.	[1] 4		37,620	Heavy hail and high wind.	Loss in growing crops, $29,000; damage to buildings and equipment, $8,000; path 14 miles long.
Jackson County, Okla	14	7 p. m.	[1] 1		7,500	Hail	Path 3½ miles long.
Cincinnati, Ohio, vicinity of	15	7 a. m.			6,000	Heavy hail	Loss mostly in crops; some windows broken.
Champion to Maryneal, Tex	15	do	400	1	32,800	do	Crop loss, $2,500; property damage, $30,300.
Llano County, Tex	15	do	[1] 20		20,000	Hail	Crop loss, $10,000; property damage, $10,000.
Arnett, Okla	15	6 p. m.			30,500	do	Crop loss, $30,000; property damage, $500.
Kimball, Nebr., 7 miles south.	15	6 p. m., M. S. T.	[1] 2		45,000	Heavy hail	Loss in oats and barley, but principally in wheat; path 8 miles long.
Runnels County, Tex., northwest corner.	15	7 p. m.	[1] 20		500,000	Hail	Loss in growing crops; considerable injury to livestock; much property damaged.
San Marcos to Wimberly, Tex.	15	P. m.			2,000	do	Some damage to fruit trees; no estimate available.
Sandy Ridge, Ala	16	2 a. m., C. S. T.	17	0	10,000	Tornado	Negro shacks and other miscellaneous farm buildings, pecan trees, and a motor truck destroyed; path 3 to 4 miles long.
Portsmouth, Ohio	16	3:30 p. m.			2,000	High wind and rain	House badly damaged; trees destroyed.
Ulysses and Hickok, Kans	16	3:30–5:45 p. m.	[1] 8		200,000	Heavy hail	Chief loss in wheat; path 15 miles long.
Fredericksburg, Tex	16	6–6:30 p. m.			526,000	Hail, wind, and rain	Winds during the hailstorm from the northeast about 50 miles an hour. Severe damage to interior of homes; in some instances, stones pierced the roof and the sheet rock ceilings, forcing occupants to seek shelter under furniture. After the storm, some homes had 4 to 5 inches of water on the floors. Loss in fruit and livestock, $35,000; property damage, $491,000.
Meade County, Kans	16	6:30 p. m.	[1] 1½		9,500	Heavy hail	Loss chiefly in wheat; path 18 miles long.
Carnegie, Okla., vicinity of	16	8 p. m.	850	0	6,000	Tornado	Path from northeast to southwest; several buildings damaged.
Kerrville, Tex	16	8:10 p. m.	440		50,000	Hail	Crop loss negligible; much property damage.
Crittenden County, Ky	17	2:30–5:30 p. m.	20–30	0	350,000	Tornado	Storm more severe in the vicinity of Marion, Ky.; 2 persons injured near Crane, Ky.
Coleman, Tex	18	4 p. m.	[1] 1		10,000	Hail	No estimate of crop loss.
Nance County, Nebr	18	4–4:30 p. m., C. S. T.	[1] 1½–2		30,000	Heavy hail	Much loss in small grains, alfalfa, and gardens.
Clay, Montague, and Denton Counties, Tex.	18	5 p. m.	325	4	112,000	Tornado	Several persons seriously injured; crop loss, $11,000.
Mapleton, Iowa, vicinity of	18					Wind	Strong wind overturned or wrecked small buildings and damaged trees. 4 farms affected.
Beloit, Iowa, vicinity of	18	6:30 p. m.		0		Tornado	This was a continuation of the Mapleton storm mentioned above. Trees uprooted, windmills, and small buildings damaged. Path narrow and 2 or 3 miles long.
Anthony to Freeport, Kans., vicinity of.	18	8–9 p. m.	[1] 10		20,000	Hail and wind	Loss in some wheat fields from 75 to 100 percent; path 15 miles long.
El Dorado, Ark., midnight 18–noon 19.	18–19					3 wind, electrical and rain storms.	Trees uprooted, plate glass windows smashed, and electric wires twisted, causing a series of fires. Garage demolish edand several houses damaged. Arkansas Power & Light Co. crews at work repairing lines from midnight until next afternoon. Second storm came at daylight, accompanied by a 30-mile wind and attended by sharp electrical flashes. The third occurred at noon but was minor in comparison with its predecessors.
Auburn and Opelika, Ala., and vicinities.	19	3 p. m.		1	5,000	Thundersquall	Child killed when hit by bricks from falling chimney, 11 miles northwest of Opelika. Power and communication lines in Opelika damaged by fallen trees. Only minor damage in Auburn.
Fairbanks and Tomball, Tex.	19		[1] 15		9,250	Wind and hail	Loss in crops, $5,000.
Robeson County, N. C., northern portion.	20	5:30–6 p. m.	600–900		6,200	do	An area of 4 square miles affected with loss in crops, $5,200; property damage, $1,000.
Laredo, Tex	20	12:58 p. m.	[1] 7		500,000	Wind, hail, and rain	7 persons severely injured. 75 percent of damage from wind; 20 percent from hail, and 5 percent from rain.
Florida, entire State	20				800,000	High winds and heavy rain.	In Pensacola Bay some ships were blown from their anchorage and crashed into the Pensacola Bay Bridge, with from $300,000 to $400,000 damage. 75 acres of shade tobacco and between 6,000 and 7,000 acres of oats and blue lupine almost completely lost; damage, $400,000.
Kinston, N. C., and vicinity	20		100–200	4	68,000	Tornado	Storm moved from southwest to northeast and struck in several spots. It first struck the Southwood School section, then jumped the Neuse River to the western edge of Fairfield, thence northward to Snow Hill road. Before striking Kinston, the severe wind demolished several homes in Seven Springs to the west-southwest of Kinston. 3 homes completely demolished; several stores and garages destroyed or damaged; 26 homes damaged; 12 barns and 25 outbuildings destroyed or damaged; 22 persons injured.

[1] Miles instead of yards.

SEVERE LOCAL STORMS FOR MAY 1946—Continued

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	May 1946						
Grifton, N. C.	20	About midnight.		0	40,000	Tornado	Leaving Kinston, N. C., the tornado struck in the area of Grifton. 6 houses damaged or destroyed and 15 tobacco barns damaged.
Cherry Lake and Pinetta, Fla., and vicinities.	20				1,100	Hail	Loss in tobacco from hail, $1,000; wind damage to corn, $100.
Wayne County, N. C., northern portion.	21		880		40,000	Wind and hail	Tobacco, cotton, and corn completely destroyed in many fields; much damage in others.
Hill City, Kans.	22	6 p. m.	6	0	40,000	Tornado and hail	Loss equally divided between crops and property; path 20 miles long.
Washington County, Kans., and vicinity.	23	3 p. m.	440	0		Tornado	Originated about 11 miles southwest and ended about 4 miles west of Washington, Kans. Path 8 miles long. Total loss in the county included in estimate of second tornado.
Washington and Hanover, Kans.	23		do.	1	131,500	do	Estimated loss includes $1,500 to crops. The second tornado in this county shows 30 families affected; 16 houses, 6 windmills, and 60 other buildings destroyed or damaged. Many cattle and much poultry killed. Path 20 miles long.
Leavenworth, Kans.	23	7 p. m.			6,000	Wind and hail	Loss from wind, $5,000; from hail, $1,000.
York County, Nebr.	23	5–6 p. m., C. S. T.	[1] 2		50,500	Heavy hail	Loss in grain, principally wheat.
Lincoln, Nebr., east and northeast of.	23	4:30 C. S. T.			16,000	Tornadic winds	Property damaged.
Haigler, Nebr.	23	11 a. m.–noon, M. S. T.	[1] 10		20,000	Heavy hail and rain	Much loss in corn, wheat, and rye.
Home City to Liberty, Nebr., and vicinities.	23	3:30–4 p. m.	440	0	36,000	Tornado	6 farmsteads badly damaged and 2 persons injured. Crop loss, $6,000, included in the estimate; path 12 miles long.
Oberlin, Kans., southeast of.	23	2 p. m.	[1] 2		25,000	Heavy hail	Loss in wheat; path 6 miles long.
Rooks County, Kans.	23	Noon–1 p. m.	[1] 1½		50,000	do	Loss in wheat; path 6 miles long.
Cheyenne County, Kans.	23	1 p. m.	15		250,000	do	Chief damage just north of St. Francis; loss in wheat; path 25 miles long.
Oklahoma City, Okla., and vicinity.	23	4 a. m.			50,000	Electrical	Several buildings damaged; path northeast to southwest.
Owasa, Okla.	24	3 p. m.	850		6,000	Hail	Property damage, $5,000; crop loss, $1,000.
Creek County, Okla.	24	3:15 p. m.	100	0	500	Tornadic winds	Path southwest to northeast; no details.
Shawnee, Okla.	24	3:30 p. m.	100	0	14,000	Tornado and hail	$5,000 property damage; $9,000 loss in crops; path 6 miles long.
Tulsa and Rogers Counties, Okla.	24	4 p. m.	500	0	12,000	do	Most damage from tornado; no details.
Granger, Tex.	24	5 p. m.	400	1	27,500	Tornado	Crops loss, $6,000; property damage, $21,500.
Latimer County, Okla.	24	6 p. m.	100	0	4,000	do	Path west to northeast; 2 persons injured.
Schullsburg to De Forest, Wis.	24	8–9 a. m.	100–133			Thundersquall	5 farm homes damaged; barns or other farm buildings and machinery wrecked or damaged on 20 farms. On the west shore of Lake Mendota, 30 homes and cottages were wrecked or damaged. Many trees broken; utility service disrupted; livestock and chickens killed. 2 persons injured by debris and 1 by lightning.
Onaway, Mich.	24					do	School and house trailer destroyed; barn damaged; loss not estimated.
Newburgh, N. Y., west of.	26	4:30–5 p. m., E. D. S. T.	15		25,100	Hail	Loss principally in fruit and vegetables; path 3 miles long.
Kendrick, Idaho, vicinity of.	26	P. m.			250,000	Heavy rain	The sudden rainfall in late afternoon caused a flash flood, with much damage to a number of buildings, demolished 3 automobiles, and caused great loss to prospective crops and some loss of livestock. 4 miles of highway washed out.
Beaufort, Berkeley, and Dorchester Counties, S. C.	27	1:30–4:30 p. m.			126,500	Thunderstorm and heavy hail.	Entire Beaufort County was in the path of the storm, with most damage in a 6-mile stretch from Prichardville through Frogmore. Loss in crops, especially tomatoes, $75,000; livestock, $1,000; property damage, $10,000. Hail caused 70 percent of loss. In the McBeth and Bowman area in Berkeley County, the ground was covered by hail to a depth of 5 and 6 inches. In Dorchester County heavy hail fell between Reevesville and Harleyville, with chief loss in tobacco. Extent of damage not known.
Sidney, Nebr., vicinity of.	27	2–11 p. m., M. S. T.			300,000	Wind	Over an area of about 20,000 acres, buildings and cars were damaged Roofs blown off 61 munition storage shelters.
Glen St. Mary, Fla.	27	2:30 p. m.				Hail and wind	Extent of damage not determined. Peach, pear, pecan, and persimmon crops damaged. Only $200 wind damage to property; estimate of damage from hail not given.
Wilbon, McCullers, and Apex, N. C.	27	6–6:30 p. m.	[1] ¼–4		100,000	Hail, wind, and rain.	Cotton crop complete loss; much loss in tobacco and corn; grain crop reduced 50-percent.
Gallatin County, Mont.	27	8–10 p. m.			10,000	Heavy hail	Loss in crops.
Hill County, Mont.	27	P. m.			10,000	Wind	Property damaged.
Boston, Mass.	27–28	4:50 p. m., 27–8:10 p. m., 28.				Northeaster	All harbor traffic stopped; beaching or swamping of several small craft in Wollaston Bay and Marblehead Harbor. Damage to trees and power lines in Greater Boston and in the Wakefield and Saugus area. Maximum wind velocity reached at time of low tide, saving coastal communications from possible loss from high water.
Wellsford to Cullison, Kans., and vicinities.	29	5 p. m.		1	150,000	Tornado and hail	Considerable property damage in Cullison. Property damage, $100,000; loss in crops, $50,000. 5 vortex clouds observed; path 7 miles long.
Forestburg, Tex.	29	6 p. m.		0		Tornado	House demolished; several buildings damaged.
Hastings, Nebr., east of.	29	6–11 p. m., C. S. T.	[1] 2		55,000	Heavy hail and wind.	Loss in wheat, oats, and barley, $50,000. Damage to buildings, $5,000.
San Antonio, Tex.	29	6:30 p. m.	[1] 7		1,350,000	Wind	No estimate on crop loss.
Penalosa, Kans.	29	7:40 p. m.		0		Tornado	No damage reported due to this storm.
Ellis County, Kans.	29	11:15 p. m.–midnight.	[1] 9		50,000	Heavy hail	Principal loss in wheat; path 11 miles long.
Pratt, Kans.	29	P. m.				do	Chief loss in wheat ranging from 25 to 100 percent.
Sumner and Cowley Counties, Kans.	30	1 p. m.		0		Tornado	Few windows broken, minor damage to buildings.
Union, Clarke, and Lucas Counties, Iowa.	30	3:15 p. m.		0	600,000	Wind, tornado, and hail.	Property damaged, 4 persons injured. Length of tornado in Union and Clarke Counties about 40 miles; width varied from ½ to 6 miles.
Arkansas City, Kans., and vicinities.	31	2:15 p. m.	13	0	10,000	do	Property damaged; path 5 miles long;
Oklahoma City, Okla.	31	5:45 p. m.			4,000	Electrical	2 persons injured; spire on top of Oklahoma City University building damaged by lighting.
Osage and Franklin Counties, Kans.	30	7–7:30 p. m.	[1] 2		100,000	Heavy hail	In some places hailstones covered the ground to depth of 2 inches. Crops total loss; rabbits and birds killed; path 30 miles long.
Arkansas City, Kans.	30	P. m.		0		Tornado	No details.
Detroit, Mich.	31	1:18–2:42 p. m.	[1] 3–4	3	40,000	Excessive rain	Hundreds of homes damaged; many automobiles and streetcars impaired; dozens of gardens flattened or washed out; basements flooded. 2 persons drowned when their boat sank in Lake St. Clair and a man died while attempting to mop up his flooded basement.
Sharpsburg, Ohio.	31	5:30 p. m.	450	0	40,000	Tornado	Several buildings on 4 farms destroyed; hogs and chickens killed; houses unroofed and otherwise damaged.

[1] Miles instead of yards.

SOLAR RADIATION AND SUNSPOT DATA FOR MAY 1946

[Solar Radiation Investigations Section, I. F. HAND, in charge]

Explanations of the tables and references to descriptions of instruments, stations, and methods of observations and to summaries of data, are given in the January 1944 MONTHLY WEATHER REVIEW, page 43. A list of the pyrheliometric stations is given on page 45 of the same REVIEW.

SOLAR RADIATION OBSERVATIONS

TABLE 1.—*Solar radiation intensities during May 1946*

[Gram calories per minute per square centimeter of normal surface]

Date	Sun's zenith distance										
	7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass									75th mer. time
		A. M.				*1.0	P. M.				
	e.	5.0	4.0	3.0	2.0		2.0	3.0	4.0	5.0	e.
MADISON, WIS.											
1946	*mb.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
May 1	8.4	0.42	0.52	0.64	0.80	1.12					6.9
May 8	7.2	.74	.86	.95	1.14	1.30					9.1
May 9	6.4	.75	.84	.99	1.18	1.40					4.8
May 13	6.1	.40	.48	.62	.83	1.11					8.1
May 17	5.8	.61	.76	.86	1.10	1.40					7.8
May 21	8.7	.62	.74	.92	1.08	1.31					10.6
May 22	10.6	.59	.74	.84	.90						9.1
May 28	11.4	.50	.65	.81	1.02	1.33					9.8
Means		.58	.70	.83	1.01	1.28					
Departures		−.03	−.06	−.12	−.09	−.09					
LINCOLN, NEBR.											
May 7	7.4					1.35					7.8
Means						(1.35)					
Departures						−.03					

SOLAR RADIATION OBSERVATIONS—Continued

TABLE 1.—*Solar radiation intensities during May 1946*—Continued

[Gram calories per minute per square centimeter of normal surface]

Date	Sun's zenith distance										
	7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass									75th mer. time
		A. M.				*1.0	P. M.				
	e.	5.0	4.0	3.0	2.0		2.0	3.0	4.0	5.0	e.
BLUE HILL, MASS.											
1946	*mb.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
May 1	8.6				1.01	1.49	0.87			0.53	7.7
May 2	5.7	0.73	0.84	0.94		1.49					3.9
May 3	1.9	.82	.94	1.08	1.27	1.49	1.13	0.94	0.79	.67	2.7
May 6	9.5	.61	.70	.83	1.04	1.36					7.7
May 9	5.8				1.22	1.39					5.6
May 10	6.9	.76	.87	.99	1.13			.86	.78	.68	6.6
May 13	8.1				1.05	1.41	1.13	.95	.80		4.5
May 19	9.3					1.26					13.4
May 20	10.6		.86	1.00	1.12						12.5
May 22	10.1	.47					1.14	1.01	.75	.52	9.2
May 23	8.2	.87	.95	1.08	1.23	1.49	1.19	1.02	.88	.79	7.9
May 24	9.0	.86	.95	1.09	1.29	1.51					9.9
May 25	15.4	.52	.63	.79	.94						19.5
May 26	18.3						1.18	1.02	.93	.83	16.3
May 30	8.6	.60	.72	.89	1.07	1.28					12.3
May 31	14.2							.41	.36	.29	14.0
Means		.69	.83	.97	1.12	1.42	1.11	.89	.76	.62	
Departures		+.05	+.05	+.02	+.03	+.06	+.05	+.01	+.03	−.01	
BOSTON, MASS.											
May 1	8.7			0.71	1.03						9.4
May 3	2.3	0.80	0.89	.96	1.17						3.8
May 6	9.8	.55	.75								8.7
May 10	7.4	.72	.77	.92	.98						6.6
May 23	11.0		.94	1.08	1.17						11.4
Means		.69	.84	.92	1.09						
Departures		+.06	+.07	+.05	+.07						
RATIO, BOSTON/BLUE HILL, ON COMPARABLE DATES											
		0.95	0.98	0.94	0.94						

*Extrapolated.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface*

[Gram calories per square centimeter]

Date	Washington, D. C.	Madison, Wis.	Lincoln, Nebr.	East Lansing, Mich.	New York, N. Y.	Fresno, Calif.	Fairbanks, Alaska	Columbia, Mo.	Boston, Mass.	Nashville, Tenn.	Twin Falls, Idaho	La Jolla, Calif.	Riverside, Calif.	Blue Hill, Mass.	Newport, R. I.	State College, Pa.	Put-in-Bay, Ohio	East Wareham, Mass.	Davis, Calif.	Boulder, Colo.	Tooele, Utah	New Orleans, La.	Toronto, Canada	Ithaca, N. Y.
1946	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
Apr. 30	292	606	558	510	450	676	528	108	406	354	664	------	550	519	569	620	638	451	807	536	562	132	495	673
May 1	187	509	70	499	346	640	544	207	575	189	660	------	414	653	582	473	486	620	751	584	661	590	610	672
May 2	195	302	282	432	593	619	526	196	585	395	635	------	578	642	628	599	431	682	765	197	625	484	582	648
May 3	378	440	38	462	658	650	454	385	653	305	628	------	566	717	709	550	436	721	795	683	637	590	643	699
May 4	66	72	508	42	141	666	328	429	451	540	632	------	639	467	419	53	102	503	820	607	749	469	281	403
May 5	597	618	315	290	192	657	327	510	107	680	639	------	620	145	141	410	358	150	780	597	827	633	167	372
May 6	474	516	145	469	280	653	320	349	505	512	659	------	583	511	564	446	292	573	796	74	832	486	431	552
Means	313	438	274	386	381	652	433	312	469	425	645	------	564	522	515	450	392	529	788	468	699	483	458	574
Departures	−158	−6	−172	+37	−61	+30	+5	−100	+85	−13	+107	------	+32	+53	+25	−13	−16	+72	+111	−35	+42	+48	------	+152
May 7	531	379	560	377	256	671	532	686	387	271	222	------	652	390	354	66	421	422	740	254	572	510	145	160
May 8	672	619	574	506	452	685	603	711	239	517	290	------	539	240	300	588	696	211	811	561	724	525	462	484
May 9	643	696	162	613	475	661	498	281	543	597	614	------	179	508	617	509	704	642	776	------	216	629	590	316
May 10	636	127	66	225	680	655	564	225	559	346	544	------	120	596	623	579	184	683	781	------	534	474	536	705
May 11	355	724	695	407	216	672	404	690	116	318	683	------	137	149	206	168	154	193	806	462	747	214	153	83
May 12	465	654	656	567	168	667	469	723	179	336	598	------	394	182	160	188	676	193	811	707	891	53	647	216
May 13	685	583	461	496	689	672	287	204	652	339	555	------	321	693	670	715	622	667	770	586	617	-----	616	721
Means	570	540	454	469	419	669	480	503	382	389	501	------	335	394	419	402	494	430	785	514	614	401	450	384
Departures	+99	+86	+8	+119	−20	+31	+28	+61	−20	−61	−60	------	−192	−71	−49	−36	+91	−36	+83	+47	−81	−55	------	−53
May 14	211	563	427	315	492	675	406	533	482	476	703	------	360	530	584	178	306	599	698	251	761	176	175	368
May 15	215	444	447	416	487	646	379	342	88	348	614	------	348	112	316	464	462	219	753	428	666	63	468	547
May 16	277	694	575	94	69	641	504	265	302	204	668	------	379	359	484	169	105	588	767	250	901	219	51	147
May 17	434	546	597	597	256	664	502	147	146	354	668	------	628	203	195	132	260	306	770	673	878	290	671	81
May 18	271	460	537	52	81	671	515	721	60	492	572	------	155	124	172	182	153	186	764	------	795	564	138	276
May 19	696	101	508	243	390	678	252	211	397	249	663	209	395	460	523	573	609	553	741	------	891	374	389	404
May 20	324	413	508	312	379	681	458	432	446	228	612	246	330	541	505	273	280	529	793	688	835	430	427	251
Means	350	460	514	290	308	665	431	379	274	336	643	------	371	332	397	282	311	426	755	458	818	304	334	296
Departures	−125	−9	+5	−45	−150	+16	−24	−85	−133	−129	+48	------	−161	−156	−107	−157	−88	−48	+58	+14	−117	−141	------	−149
May 21	404	569	716	255	159	697	325	708	204	683	548	354	437	210	170	418	256	184	530	495	785	468	348	300
May 22	749	546	578	411	719	499	341	749	653	714	302	------	388	717	696	765	625	691	527	385	623	522	674	776
May 23	730	405	119	615	553	524	171	286	661	375	280	------	666	745	750	745	665	746	537	333	482	540	599	729
May 24	716	356	157	217	574	678	327	356	645	312	600	------	514	724	717	552	306	739	689	124	674	440	366	542
May 25	694	207	610	96	537	320	426	179	596	147	261	458	437	671	560	500	315	584	368	692	658	251	333	434
May 26	214	767	734	405	393	289	417	562	332	540	181	501	329	366	553	223	102	595	640	406	286	406	516	222
May 27	550	650	645	360	39	579	374	721	48	359	244	------	537	129	121	125	137	140	819	502	362	768	329	135
Means	580	500	508	337	425	512	340	509	448	447	345	------	473	509	510	475	344	526	586	420	553	485	452	448
Departures	+84	+9	−30	−17	−37	−146	−104	+45	+8	−47	−254	------	−75	+46	+60	+26	−104	+31	−90	−36	−137	+45	------	−29
May 28	78	728	628	644	75	725	366	684	42	667	506	645	708	98	169	157	723	199	830	------	396	797	698	290
May 29	742	702	358	638	326	731	128	514	285	647	687	------	690	391	240	790	735	323	863	------	825	910	643	726
May 30	721	537	542	616	639	725	664	417	604	567	702	592	627	678	657	732	690	674	767	649	917	648	560	722
May 31	636	309	604	219	564	604	575	503	531	437	500	575	657	601	587	693	315	646	769	576	883	261	98	613
June 1	535	115	184	117	324	729	508	-----	116	195	484	------	668	135	185	187	111	200	821	431	782	398	399	196
June 2	348	741	352	248	98	752	606	-----	40	320	642	582	665	80	91	158	613	103	843	166	880	694	611	187
June 3	694	742	592	567	489	738	568	-----	660	206	606	------	664	683	722	594	749	756	856	724	874	484	300	512
Means	536	553	466	435	359	715	488	-----	326	434	598	598	668	381	379	473	562	414	821	509	794	599	473	464
Departures	+23	+62	−58	+41	−134	+45	+6	-----	−136	−79	+18	+52	+130	−145	−157	+14	+55	−102	+149	+46	+112	+120	------	−25

ACCUMULATED Ddepartures ON JUNE 3, 1946

	+105	+2,086	−2,275	+1,365	−4,291	+2,933	-----	-----	−553	−651	−588	------	−3,591	−1,120	−511	+238	------	------	+9,093	+2,499	−3,735	------	------	------

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

[Communicated by the Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under Mount Wilson group number, longitude, latitude, area of spot or group, and spot count, are included respectively: number of groups, assumed longitude of center of the disk, assumed latitude of center of the disk, total areas of spot and groups, and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 1	12 8	8040	−70	187	−30	70	48	2	G	U. S. Naval.
		8039	−52	205	−19	54	48	5		
		8039	−49	208	−18	51	97	7		
		8038	−38	219	−29	43	267	10		
		8033	−37	220	−15	38	242	1		
		8033	−35	222	−16	37	97	9		
		8033	−31	226	−17	33	242	6		
		8032	−30	227	−26	37	12	6		
		8036	−13	244	−25	25	36	1		
		8036	−8	249	−23	22	48	5		
		8029	−8	249	+27	32	145	1		
		8037	+3	260	−36	33	12	4		
		8028	+17	274	−21	23	121	10		
		8035	+59	316	+22	62	24	1		
		8034	+60	317	−23	61	12	1		
		8035	+65	322	+22	69	48	4		
		8026	+75	332	+33	80	24	2		
		8027	+80	337	−18	80	97	3		
		(13)		(257)	(−4)		1,620	78		
2	8 48	8040	−57	188	−30	60	48	2	VG	Mt. Wilson.
		8039	−42	203	−19	43	145	25		
		8039	−36	209	−17	38	291	14		
		8038	−26	219	−28	35	485	20		
		8033	−25	220	−15	26	291	23		
		8033	−21	224	−16	24	242	17		
		8032	−18	227	−26	27	12	1		
		8036	− 3	242	−26	22	36	2		
		8029	+ 3	248	+27	32	145	1		
		8036	+ 4	249	−23	19	121	16		
		8037	+17	262	−34	34	36	12		
		8028	+30	275	−21	34	97	17		
		8035	+71	316	+25	75	145	1		
		8035	+75	320	+22	77	97	2		
		(10)		(245)	(−4)		2,191	153		
3	10 26	8041	−70	161	−28	70	145	1	F	U. S. Naval.
		8040	−44	187	−30	50	48	2		
		8039	−27	204	−20	31	48	8		
		8039	−25	206	−17	28	48	10		
		8039	−20	211	−18	24	291	14		
		8038	−14	217	−27	27	339	14		
		8033	−11	220	−14	15	194	3		
		8038	−10	221	−27	26	242	12		
		8033	− 6	225	−15	13	242	22		
		8032	− 3	228	−26	24	12	3		
		8036	+16	247	−24	25	12	3		
		8029	+17	248	+27	36	145	1		
		8036	+20	251	−23	26	73	4		
		8028	+45	276	−22	46	48	3		
		(9)		(231)	(−4)		1,887	100		
4	9 23	8041	−59	159	−27	61	97	10	VG	Mt. Wilson.
		8041	−57	161	−30	60	242	7		
		8040	−30	188	−30	38	48	15		
		8039	−13	205	−19	21	121	30		
		8039	− 6	212	−17	16	339	6		
		8038	− 1	217	−28	25	485	20		
		8038	+ 3	221	−27	25	194	23		
		8033	+ 3	221	−15	12	194	1		
		8033	+ 5	223	−18	16	73	32		
		8033	+ 8	226	−16	15	509	14		
		8036	+27	245	−24	32	24	20		
		8029	+30	248	+27	42	121	1		
		8036	+33	251	−22	37	73	4		
		8028	+58	276	−21	59	24	4		
		(8)		(218)	(−4)		2,544	187		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 5	11 29	8041	−47	157	−28	51	121	7	G	U. S. Naval.
		8041	−42	162	−30	47	194	1		
		8040	−20	184	−30	32	6	1		
		(*)	−15	189	−27	28	6	1		
		(*)	−15	189	+11	21	12	3		
		8039	0	204	−20	16	73	10		
		8039	+9	213	−19	18	339	1		
		8038	+15	219	−27	28	582	25		
		8033	+15	219	−15	19	170	1		
		8033	+20	224	−15	22	158	15		
		8032	+26	230	−25	32	6	2		
		8036	+40	244	−25	43	12	3		
		8029	+42	246	+27	51	121	1		
		8036	+46	250	−24	49	97	6		
		8028	+70	274	−21	70	6	2		
		(11)		(204)	(−4)		1,903	79		
6	11 19	8042	−77	114	−36	78	194	1	G	Do.
		8043	−75	116	+28	80	24	4		
		8041	−32	159	−29	40	73	9		
		8041	−29	162	−30	38	170	3		
		8039	+13	204	−20	21	48	8		
		8039	+21	212	−19	26	339	2		
		8038	+26	217	−27	33	242	15		
		8033	+29	220	−15	31	145	2		
		8038	+33	224	−27	40	194	1		
		8033	+34	225	−15	36	73	7		
		8032	+40	231	−25	43	6	2		
		8036	+52	243	−24	54	24	2		
		8029	+54	245	+27	61	97	1		
		8036	+60	251	−24	61	73	4		
		(9)		(191)	(−4)		1,702	61		
7	12 53	8043	−65	112	+26	70	12	2	G	Do.
		8042	−63	114	−35	67	218	1		
		8041	−20	157	−28	31	73	10		
		8041	−16	161	−30	30	194	4		
		8039	+26	203	−20	30	12	9		
		8039	+35	212	−19	37	339	2		
		8038	+39	216	−27	43	218	11		
		8033	+43	220	−17	48	194	2		
		8044	+45	222	−41	55	12	1		
		8033	+48	225	−17	49	24	3		
		8038	+48	225	−27	52	194	1		
		8036	+66	243	−25	67	12	2		
		8029	+68	245	+27	71	97	1		
		8036	+75	252	−24	75	6	1		
		(9)		(177)	(−4)		1,605	50		
8	10 53	8042	−50	115	−35	56	206	1	G	Do.
		8041	−7	158	−27	25	61	9		
		8041	−3	162	−30	27	121	12		
		8039	+39	204	−20	41	24	2		
		8039	+48	213	−18	50	339	1		
		8038	+50	215	−28	53	121	12		
		8033	+54	219	−16	55	97	3		
		8038	+60	225	−27	63	109	1		
		8029	+80	245	+27	80	97	1		
		8029	+84	249	+27	85	97	1		
		(6)		(165)	(−3)		1,272	43		
9	11 2	8042	−38	113	−35	48	170	1	F	Do.
		8041	+7	158	−30	28	48	4		
		8041	+11	162	−31	30	97	8		
		8039	+59	210	−19	60	291	2		
		8038	+61	212	−28	65	97	9		
		8033	+68	219	−17	69	48	1		
		8038	+71	222	−27	72	97	1		
		(5)		(151)	(−3)		848	26		
10	10 56	8045	−45	93	+15	48	73	5	F	Do.
		8045	−41	97	+14	44	73	2		
		8042	−25	113	−35	40	194	1		
		8041	+20	158	−29	32	24	2		
		8041	+25	163	−30	36	24	2		
		8039	+72	210	−19	72	291	1		
		8038	+75	213	−28	76	97	2		
		(5)		(138)	(−3)		776	15		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 11	10 36	8045	−31	94	+15	35	121	12	P	U. S. Naval.
		8045	−27	98	+14	33	73	6		
		8042	−12	113	−35	35	145	6		
		8041	+35	160	−30	43	12	1		
		8041	+36	161	−29	43	24	1		
		8039	+86	211	−18	86	242	1		
		(4)		(125)	(−3)		617	27		
12	10 42	8045	−17	95	+15	25	242	6	F	Do.
		8045	−15	97	+9	20	12	3		
		8045	−14	98	+14	21	145	2		
		8042	−7	105	−35	34	6	2		
		8042	−2	110	−37	36	6	2		
		8042	+2	114	−35	34	48	1		
		(*)	+46	158	−18	48	12	2		
		8041	+49	161	−30	53	36	4		
		(4)		(112)	(−3)		507	22		
13	11 2	8045	−4	95	+15	18	242	6	F	Do.
		8046	−1	98	+30	32	24	5		
		8045	−1	98	+15	17	24	4		
		8045	+1	100	+13	15	12	3		
		8045	+3	102	+13	17	218	1		
		8042	+12	111	−36	35	48	1		
		8041	+60	159	−32	64	12	1		
		(4)		(99)	(−3)		580	21		
14	8 58	8045	+7	93	+15	20	218	7	G	Mt. Wilson.
		8046	+12	98	+29	33	48	15		
		8045	+15	101	+12	21	170	2		
		8042	+26	112	−34	39	16	1		
		8041	+75	161	−30	78	24	1		
		(4)		(86)	(−3)		476	26		
15	8 50	8045	+20	93	+15	27	194	4	G	Do.
		8045	+22	95	+14	27	24	4		
		8045	+28	101	+12	32	145	1		
		(1)		(73)	(−3)		363	9		
16	13 35	8047	−68	350	+27	71	97	1	F	U. S. Naval.
		8048	−68	350	+23	70	73	7		
		8051	−45	13	+19	50	6	1		
		8049	−16	42	−25	32	12	4		
		8045	+37	95	+16	41	97	7		
		8045	+43	101	+15	45	12	3		
		8045	+44	102	+13	46	121	1		
		(5)		(58)	(−3)		418	24		
17	11 0	8054	−86	320	+24	88	194	1	F	Do.
		8052	−68	338	+15	68	48	4		
		8048	−61	345	+21	64	48	2		
		8048	−57	349	+21	61	61	4		
		8047	−57	349	+26	62	61	1		
		8050	−28	18	−9	29	6	2		
		8049	−3	43	−26	25	12	2		
		8045	+48	94	+17	51	61	6		
		8045	+56	102	+15	58	97	1		
		8053	+59	105	+13	61	97	6		
		(8)		(46)	(−2)		685	29		
18	10 38	8054	−70	323	+25	72	291	1	G	Do.
		8052	−60	333	+17	62	24	2		
		8952	−54	339	+15	58	24	3		
		8048	−49	344	+22	54	24	2		
		8047	−43	350	+26	50	48	1		
		8057	−33	0	−14	35	24	2		
		8057	−31	2	−13	32	24	3		
		8051	−17	16	+18	26	6	1		
		8049	+7	40	−26	25	12	1		
		8055	+46	79	−10	46	12	5		
		8055	+48	81	−11	49	6	1		
		8045	+61	94	+18	64	24	1		
		8045	+68	101	+16	69	73	1		
		8053	+72	105	+13	73	242	2		
		(10)		(33)	(−2)		834	26		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 19	12 5	(*)	−70	309	+26	73	97	2	G	U. S. Naval.
		8054	−55	324	+24	60	242	2		
		8052	−45	334	+16	47	48	3		
		8052	−44	335	+15	47	24	4		
		8052	−43	336	+17	47	73	6		
		8052	−40	339	+14	43	24	4		
		8059	−36	343	+25	43	6	3		
		8048	−33	346	+22	40	12	2		
		8047	−29	350	+25	38	24	1		
		8048	−26	353	+22	35	12	1		
		8057	−18	1	−16	23	12	2		
		8057	−16	3	−15	20	24	2		
		8057	−14	5	−15	19	48	4		
		8051	−2	17	+18	21	12	1		
		8058	+69	88	+18	71	24	1		
		8045	+76	95	+15	77	24	2		
		8053	+85	104	+12	86	145	3		
		(11)		(19)	(−2)		851	43		
20	10 37	8061	−55	311	+19	58	24	3	P	Do.
		8054	−44	322	+24	50	242	1		
		8052	−33	333	+16	37	194	8		
		8052	−30	336	+15	35	48	5		
		8052	−29	337	+17	34	97	3		
		8052	−27	339	+15	32	145	9		
		8059	−23	343	+26	36	24	1		
		8048	−22	344	+23	33	12	1		
		8047	−17	349	+25	32	24	1		
		8057	−6	0	−16	16	48	8		
		8057	−1	5	−15	14	36	2		
		8051	+11	17	+18	23	12	1		
		8058	+80	86	+18	80	24	1		
		(9)		(6)	(−2)		930	44		
21	11 2	8061	−46	307	+20	50	48	2	P	Do.
		8061	−43	310	+18	47	12	1		
		8061	−41	312	+18	45	48	3		
		8061	−38	315	+19	42	24	2		
		8054	−31	322	+24	40	242	1		
		8060	−27	326	+34	43	48	8		
		8052	−21	332	+16	27	170	5		
		8052	−14	339	+15	23	121	6		
		8059	−10	343	+25	28	6	1		
		8048	−8	345	+23	27	6	1		
		8047	−5	348	+25	27	12	1		
		8048	−3	350	+23	25	12	1		
		8057	+7	0	−15	16	24	3		
		8057	+10	3	−14	16	24	2		
		(8)		(353)	(−2)		797	37		
22	13 30	8061	−22	316	+19	30	97	3	F	Do.
		8054	−16	322	+24	30	145	1		
		8060	−11	327	+33	36	12	2		
		8052	−5	333	+15	18	194	5		
		8052	0	338	+14	16	145	7		
		8052	+1	339	+16	17	48	2		
		8057	+23	1	−14	25	73	4		
		8057	+26	4	−13	29	61	3		
		(5)		(338)	(−2)		775	27		
23	10 36	8063	−38	289	+30	48	24	3	VG	Do.
		8061	−19	308	+19	27	6	1		
		8061	−15	312	+20	27	73	11		
		8061	−10	317	+19	23	194	7		
		8054	−10	317	+23	26	24	3		
		8054	−5	322	+24	26	194	1		
		8060	0	327	+33	35	6	1		
		8062	+1	328	−19	17	24	12		
		8052	+6	333	+15	18	194	10		
		8052	+10	337	+16	20	24	7		
		8052	+12	339	+15	21	73	8		
		8059	+16	343	+23	30	36	4		
		8057	+34	1	−14	36	145	6		
		8057	+36	3	−13	38	61	8		
		(8)		(327)	(−2)		1,078	82		
24	10 54	8063	−25	289	+30	40	24	6	F	Mt. Wilson.
		8064	−10	304	+36	39	6	1		
		8061	−3	311	+20	22	73	5		
		8061	+3	317	+19	21	97	5		

See footnotes at end of table.

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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 24	10 54	8061	+5	319	+19	21	97	1		Mt. Wilson.
		8054	+7	321	+25	28	194	1		
		8060	+11	325	+34	38	6	1		
		8062	+13	327	−19	21	12	1		
		8052	+20	334	+15	26	194	1		
		8052	+25	339	+15	30	97	3		
		8059	+28	342	+24	38	97	4		
		8057	+47	1	−14	48	97	7		
		8057	+51	5	−14	52	48	4		
		(9)		(314)	(−2)		1,042	40		
25	10 19	8065	−85	215	−20	85	48	1	G	U. S. Naval.
		(*)	−62	238	+28	67	16	2		
		8063	−7	293	+30	32	12	2		
		8061	+8	308	+20	22	24	1		
		8061	+10	310	+21	23	194	5		
		8061	+14	314	+20	25	48	9		
		8061	+18	318	+20	27	145	2		
		8054	+20	320	+24	33	194	1		
		8062	+33	333	−22	38	24	4		
		8052	+33	333	+15	37	242	6		
		8052	+36	336	+15	39	97	8		
		8052	+38	338	+14	41	48	3		
		8059	+39	339	+25	46	48	2		
		8059	+41	341	+23	47	145	7		
		8057	+60	0	−14	60	73	3		
		8057	+64	4	−13	64	24	1		
		(9)		(300)	(−1)		1,382	57		
26	11 25	8065	−73	213	−19	73	97	1	F	Do.
		8061	+20	306	+20	28	36	7		
		8061	+23	309	+22	32	158	1		
		8061	+24	310	+19	31	97	10		
		8061	+30	316	+19	35	73	12		
		8061	+32	318	+19	37	194	1		
		8054	+32	318	+24	39	206	1		
		8052	+46	332	+16	49	121	9		
		8062	+47	333	−21	51	73	9		
		8052	+50	336	+16	52	97	10		
		8059	+55	341	+24	60	97	3		
		8057	+75	1	−13	75	48	2		
		(7)		(286)	(−1)		1,297	66		
27	10 46	8065	−59	215	−19	61	61	1	G	Do.
		8066	−16	258	−19	23	61	10		
		8061	+35	309	+19	40	48	3		
		8061	+36	310	+22	41	170	1		
		8061	+39	313	+18	43	61	12		
		8061	+45	319	+19	49	291	8		
		8054	+45	319	+24	50	218	1		
		8062	+57	331	−21	59	48	4		
		8052	+59	333	+16	60	48	4		
		8052	+60	334	+18	62	6	1		
		8052	+62	336	+15	63	48	5		
		8062	+64	338	−21	65	12	1		
		8052	+68	342	+15	69	12	4		
		8059	+69	343	+24	71	36	1		
		(7)		(274)	(−1)		1,120	56		
28	8 47	8065	−44	217	−19	47	48	1	F	Mt. Wilson.
		8066	−2	259	−18	17	24	4		
		8061	+49	310	+21	52	73	1		
		8061	+49	310	+19	52	109	1		
		8061	+57	318	+17	59	194	1		
		8054	+59	320	+24	62	291	1		
		8062	+70	331	−21	70	48	3		
		8052	+73	334	+16	75	145	4		
		(6)		(261)	(−1)		932	16		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR MAY 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	h m		°	°	°	°				
May 29	11 0	8065	−30	217	−19	34	48	6	F	U. S. Naval.
		8067	−5	242	+30	31	12	1		
		8067	−2	245	+29	30	24	1		
		8066	+15	262	−19	22	12	1		
		8061	+58	305	+21	60	24	2		
		8061	+61	308	+22	63	218	2		
		8061	+69	316	+18	70	412	1		
		8054	+69	316	+24	71	206	1		
		(5)		(247)	(−1)		956	15		
30	13 20	8065	−14	218	−18	22	48	1	G	Do.
		8067	+13	245	+28	33	12	1		
		8061	+76	308	+22	78	194	1		
		8061	+80	312	+18	80	24	1		
		8061	+86	318	+17	86	291	1		
		8054	+86	318	+24	88	194	1		
		(4)		(232)	(−1)		763	6		
31	11 14	8068	−68	152	+18	79	6	1	G	Do.
		8068	−64	156	+17	66	61	1		
		8065	−3	217	−19	18	48	1		
		(2)		(220)	(−1)		115	3		

Mean daily area for 31 days=1,060
Mean 10 g+s for 31 days=116.7

*Not numbered.
VG=very good; G=good: F=fair; P=poor.
g=number of groups; s=number of spots.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR MAY 1946

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland]

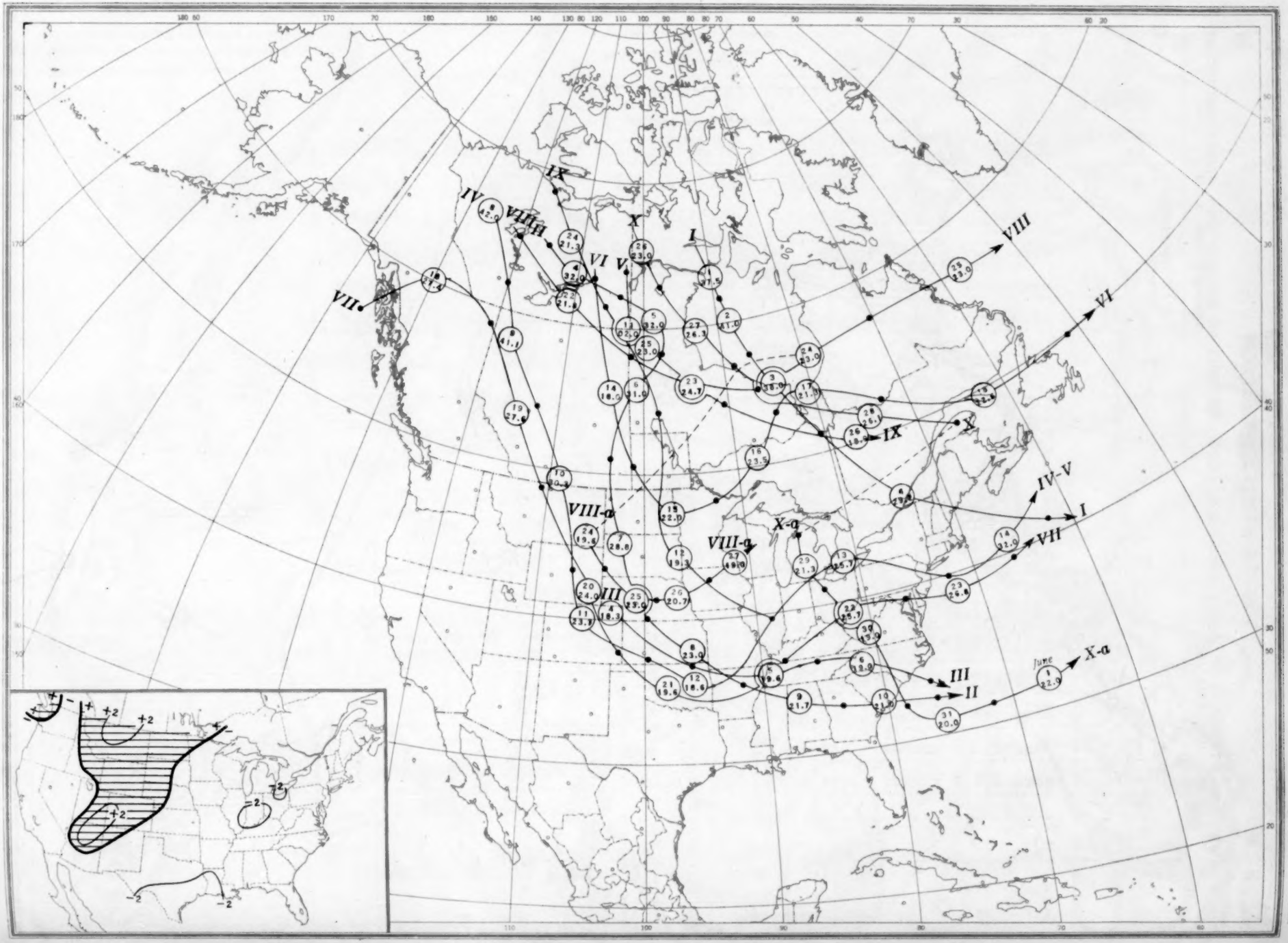
May 1946	Relative numbers	May 1946	Relative numbers	May 1946	Relative numbers
1	163	11	52	21	78
2	150	12	41	22	84
3	156	13	36	23	88
4	145	14	40	24	102
5	150	15	17	25	110
6	116	16	37	26	85
7	103	17	66	27	104
8	82	18	92	28	76
9	72	19	85	29	59
10	61	20	89	30	41
				31	37

Mean, 31 days=84.4

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, May 1946

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, May 1946

Chart II. Tracks of Centers of Anticyclones, May 1946. (Inset) Departure of Monthly Mean Pressure from Normal

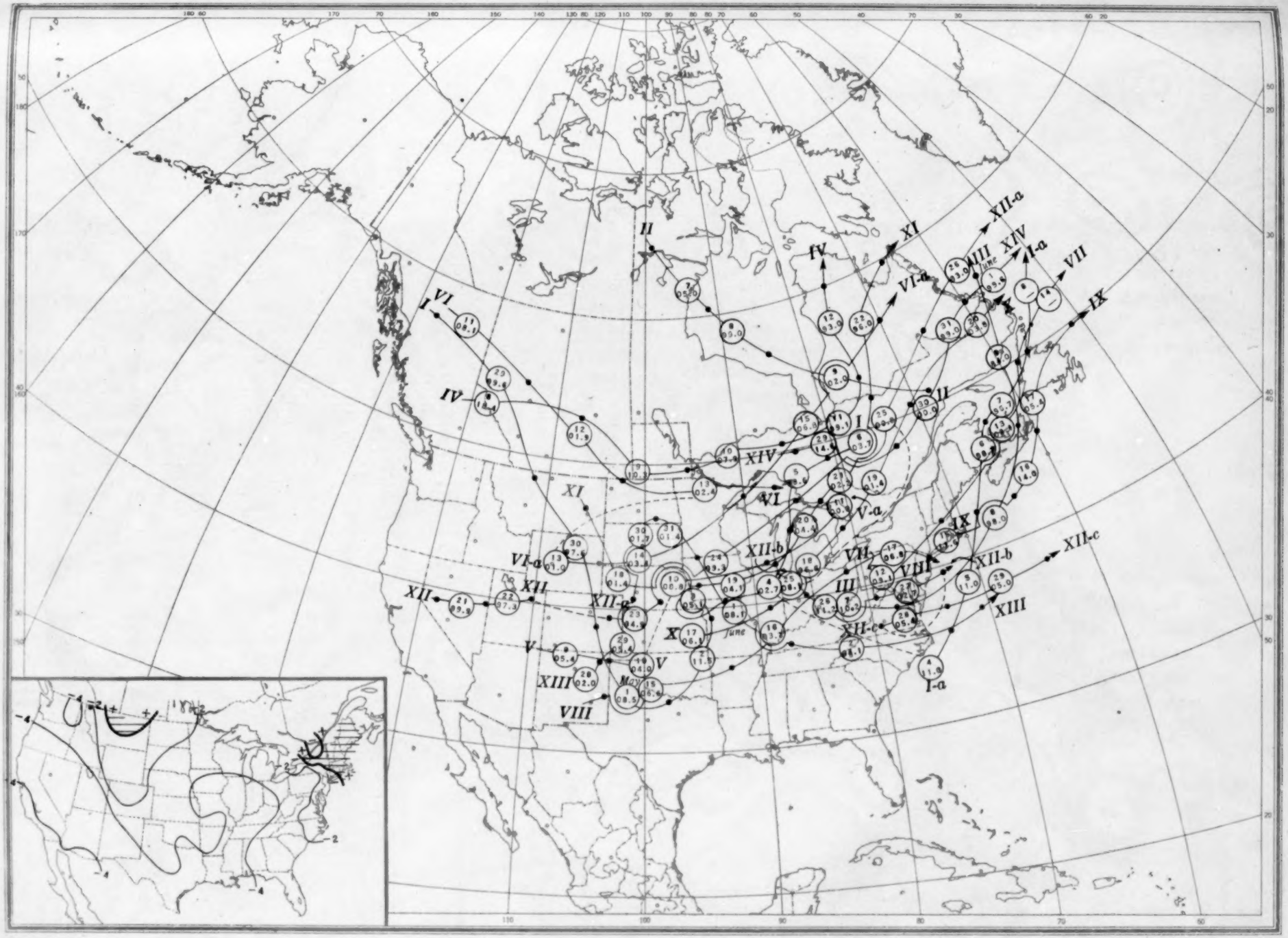


Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, May 1946. (Inset) Change in Mean Pressure from Preceding Month

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, May 1946. (Inset) Change in Mean Pressure from Preceding Month



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, May 1946

Chart V. Total Precipitation, Inches, May 1946. (Inset) Departure of Precipitation from Normal

Chart V. Total Precipitation, Inches, May 1946. (Inset) Departure of Precipitation from Normal

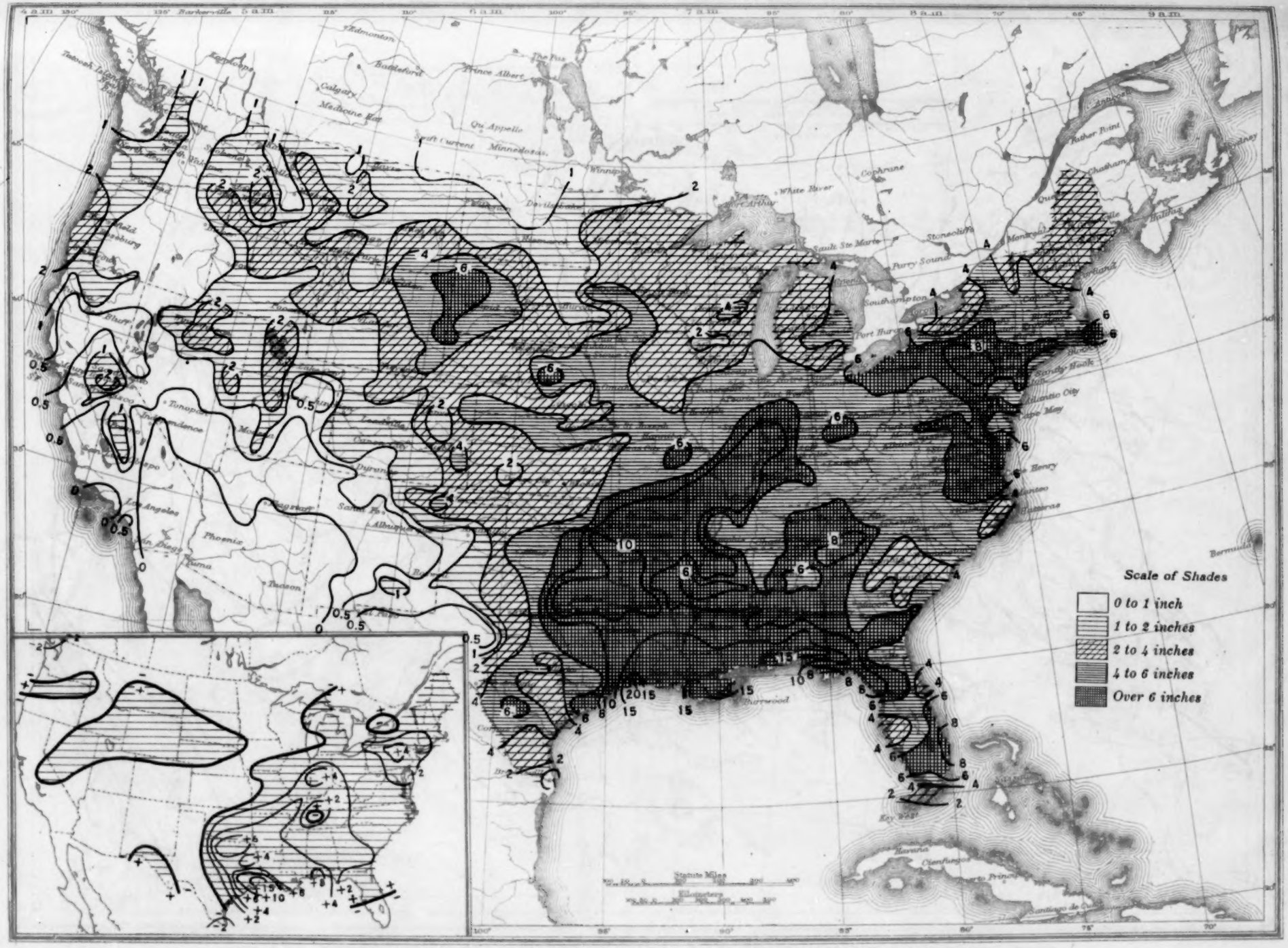


Chart VI. Isobars (mb), at Sea Level and Isotherms (°F.) at Surface; Prevailing Winds, May 1946

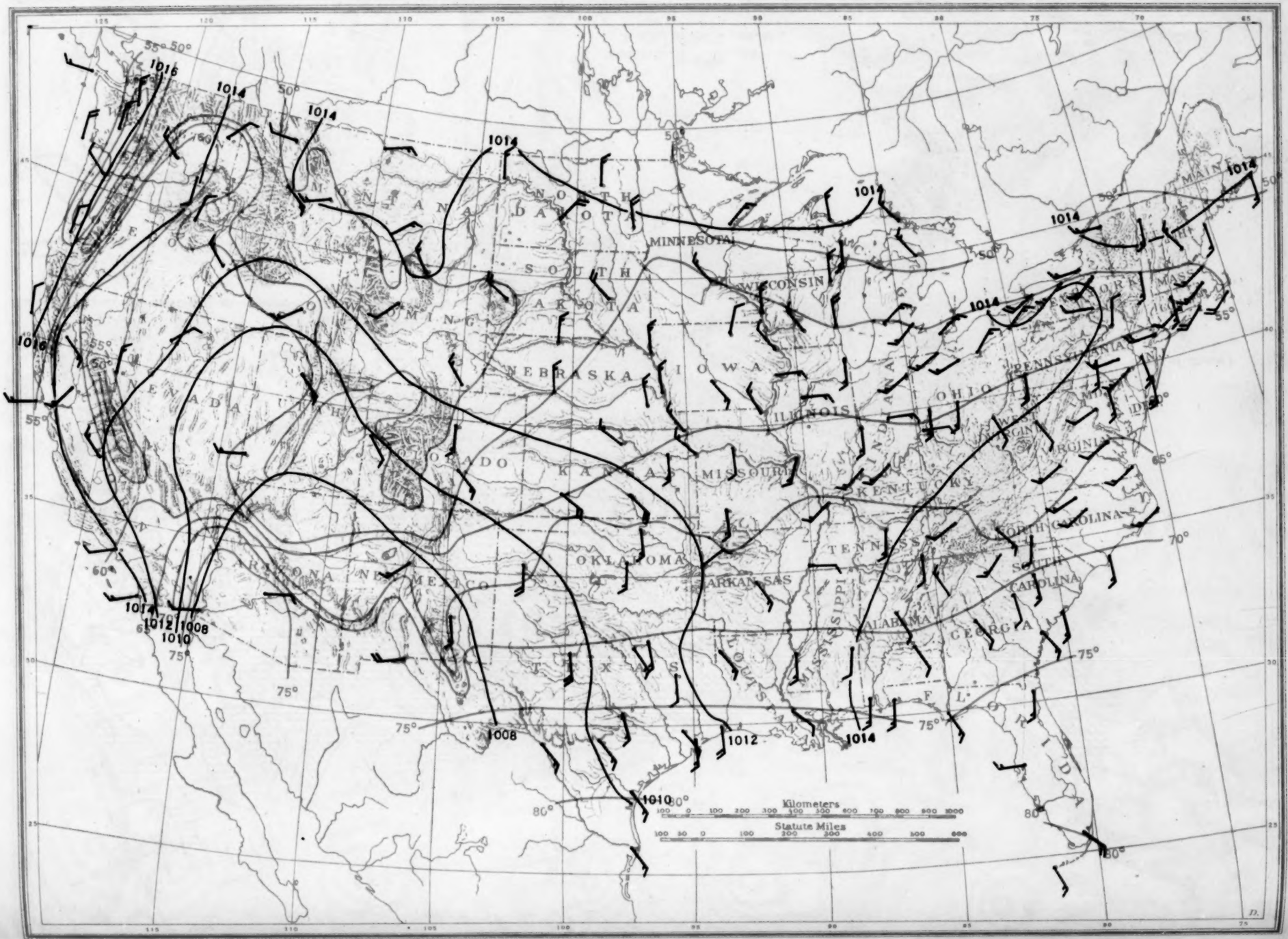
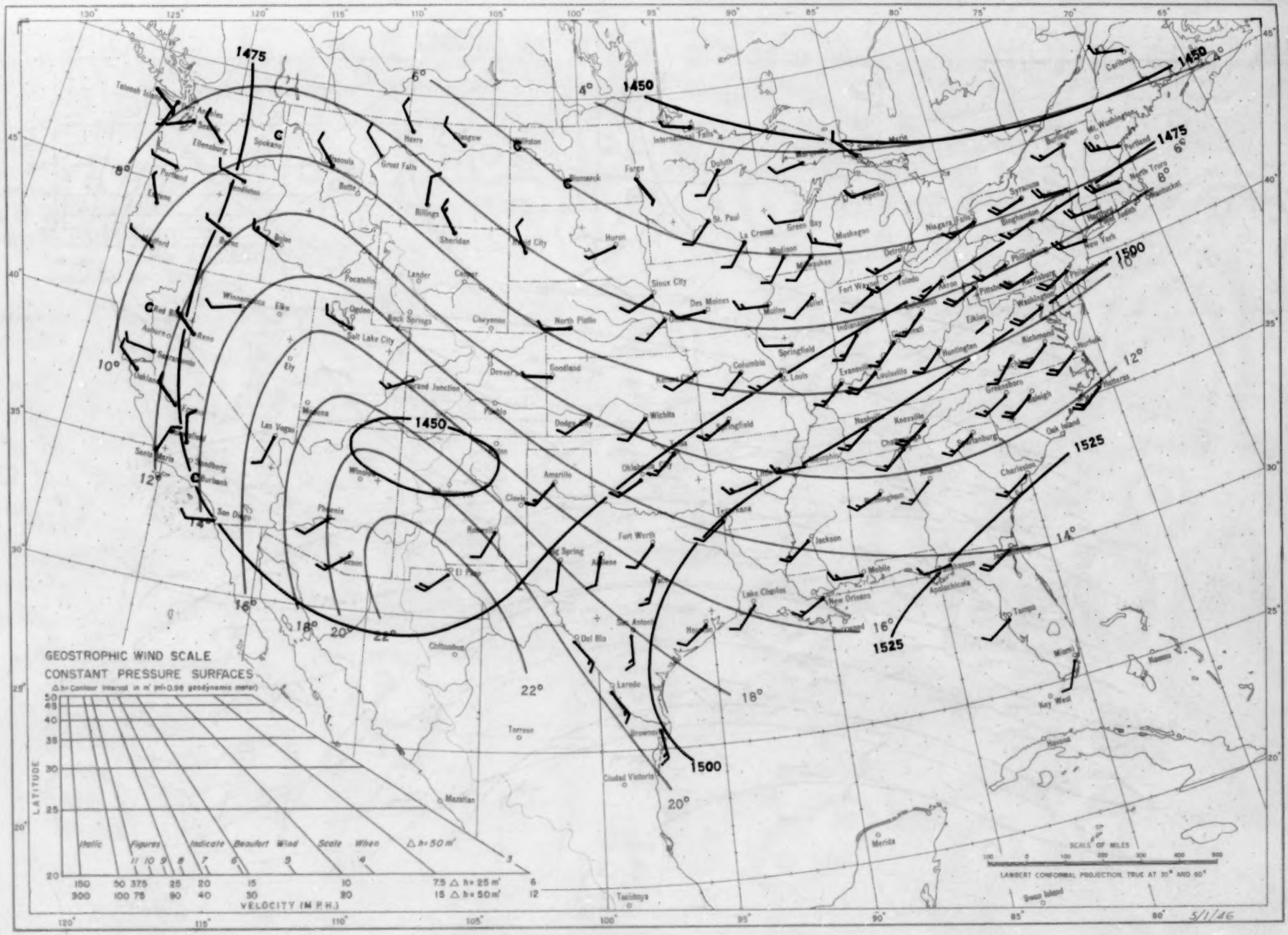


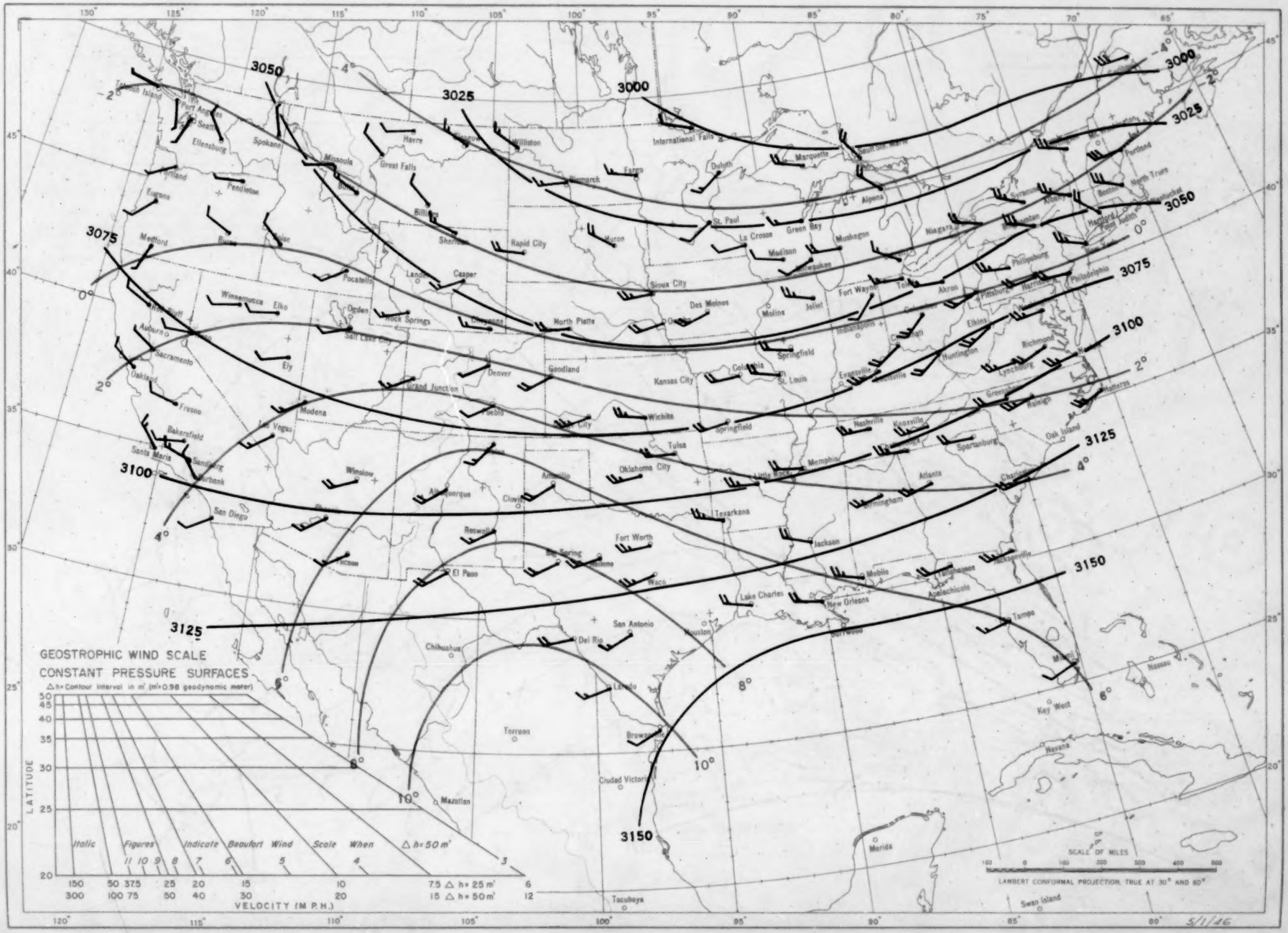
Chart VIII, May 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in

Chart VIII, May 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 850-millibar Pressure Surface, and Resultant Winds at 1,500 Meters (m.s.l.)



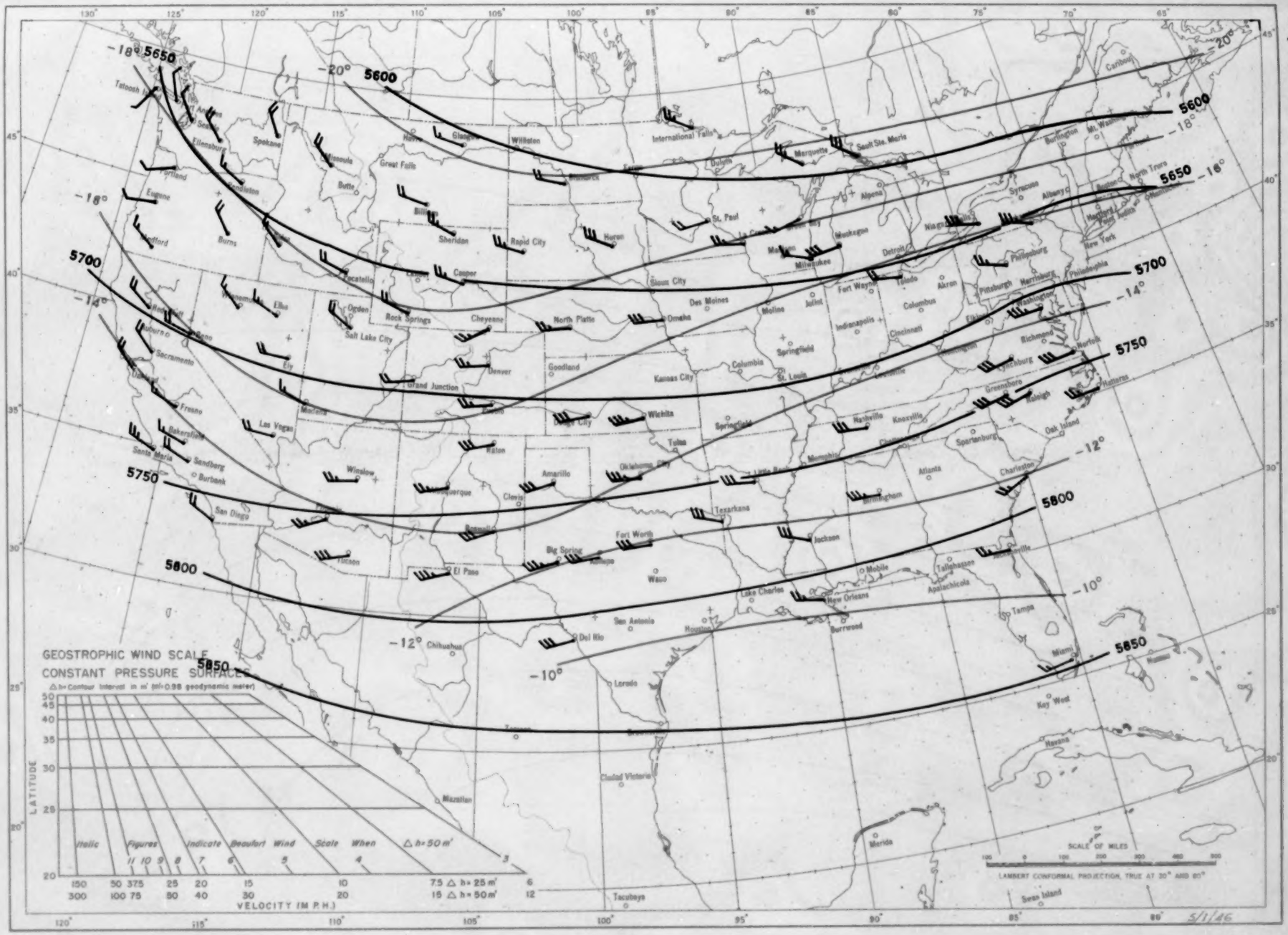
Contour lines and isotherms based on radiosonde observations at 0300 G.C.T. and winds based on pilot balloon observations at 2200 G.C.T.

Chart IX, May 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 700–millibar Pressure Surface, and Resultant Winds at 3,000 Meters (m.s.l.)



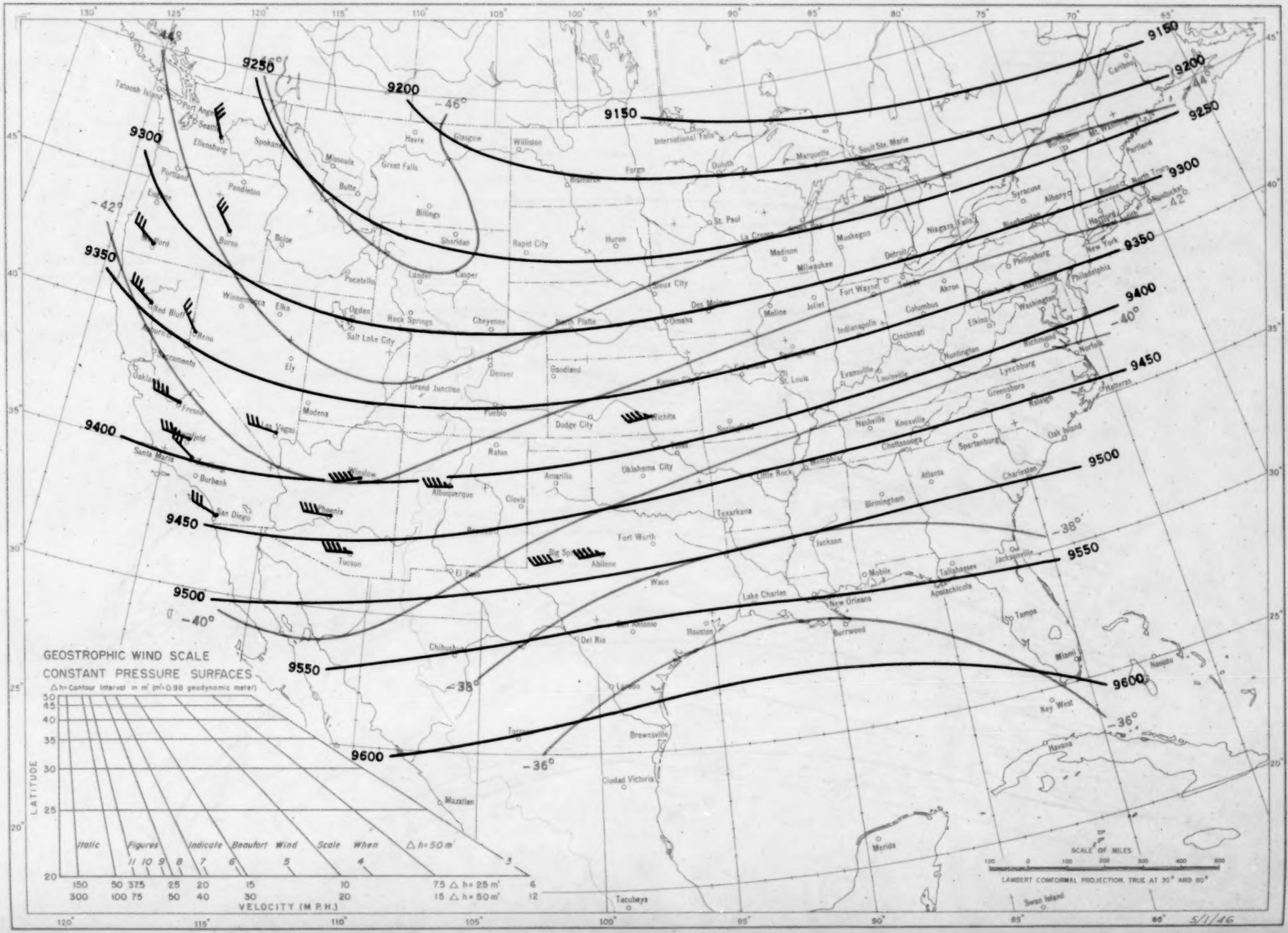
Contour lines and isotherms based on radiosonde observations at 0300 G.C.T. and winds based on pilot balloon observations at 2200 G.C.T.

Chart X, May 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 500–millibar Pressure Surface, and Resultant Winds at 5,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T. and winds based on pilot balloon observations at 2200 G.C.T.

Chart XI, May 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 300-millibar Pressure Surface, and Resultant Winds at 10,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T. and winds based on pilot balloon observations at 2200 G.C.T.